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Future Farmer
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Boom Fork
August-September, 1970

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The National
Future Farmer

VOLUME 18 NUMBER 6 AUGUST-SEPTEMBER, 1970

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Our Cover

Dennis Stacey, chapter president of the Old Fort, Ohio, FFA, raises about ten acres of tomatoes annually. During the bulk harvest operation he drives the forklift for moving the lugs of tomatoes. Here Dennis and his father Mr. Dale Stacey check the crap for quality.

Photo by Ralph Woodin

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Your Right to Vote

CITIZENSHIP has always been one of the major objectives of the FFA. Recently it took on added dimensions when the Congress passed and President Nixon signed into law a bill giving 18-year-olds the right to vote. So for the first time FFA has a significant number of voters among its membership.

A recent survey conducted by this magazine indicates that 30 percent of the subscribers—which closely parallels FFA membership—is 18 years old or older. This means that nearly one-third of the FFA membership will help elect the next president of the United States in 1972; they will help decide who will represent their state in the U.S. Senate, and their district in the House of Representatives.

Some claim the law is unconstitutional, and it most surely will be challenged in the courts. You will want to follow this action closely but if the law is upheld, many of you will have the opportunity to exercise one of our basic liberties—the right to vote.

The FFA Organization is non-political and is required to be under its federal charter. This means that individuals or groups, acting in the name of FFA, cannot engage in bi-partisan political activity. But this in no way limits your political activity as an individual. As a private citizen, you may support the political party or candidate of your choice, or join with other groups for this purpose. In fact, to do so is to fulfill your obligation of responsible citizenship.

Never before in the history of our country have young minds been called upon in such a manner to help solve some of the problems confronting us. It's a great trust that has been placed in your hands. Handle it wisely.

FFA Leaders Deceased

We regret to report the death in recent months of three men who contributed much to FFA. Each at one time served as State FFA Advisor in their respective states and also served a term on the national FFA Board of Directors and FFA Foundation Board of Trustees. The men and the time they served on the Board of Directors are: Mr. J. B. Perky, Oklahoma, 1945-47; Mr. George H. Hurt, Texas, 1951-53; and Mr. George R. Cochran, 1967-68. (Mr. Cochran previously served on the Foundation Board of Trustees, 1954-56.)

Wilson Carnes, Editor

Looking Ahead

Livestock

THE INTERNATIONAL—When the International Live Stock Show opens in Chicago on November 27, the day after Thanksgiving, it will have a new look. In place of the dairy activities—now moved to the International Dairy Show, Madison, Wisconsin—will be the new International Live Stock Equipment and Supply Show. "It's the perfect opportunity for farmers and agriculture suppliers to meet at the greatest show of livestock in the nation," says James Nance, director of the commercial exhibit. In addition, the 71st International will feature a championship rodeo and headline entertainment.

PASTE FEEDING—A new automatic paste feeding system has been tested at the Ohio Agricultural Research and Development Center in Wooster. The system blends the basic ration at a central storage and pumping station. Automatically the feed is moved by pipes to the feeders. There each pen's feed is supplemented as desired and reblended with a reversible auger. With a compact housing design, 2,500 hogs can automatically feed themselves.

BEEF BUILD-UP—It appears that the stage is set for an increase in beef cattle numbers, says an agricultural economist at the University of Missouri. He cites the growing demand as a major reason for causing high prices for feeder calves. If prices continue to rise, producers are expected to hang onto more heifers, and cattle numbers will increase sharply within the next one to three years.

IDENTIFYING FATS—Procedures for identifying vegetable and animal fats and the amounts of each in a mixture have been developed by University of Wisconsin food scientists. This sonic method can be used for analyzing the fat portion of the 50 percent vegetable fat—50 percent butterfat products now on the market and detecting adulterated butteroil. Since vegetable fat is cheaper than milk fat, sonic testing could assure that customers receive all the milk fat they've paid for.

EATING-OUT EFFECTS—The growing habit of eating-out by Americans will help the livestock farmer, says a North Carolina economist. This is especially true in the institutional marketing of beef and poultry. Already the demand is for larger cattle which are better suited to making beef slices for sandwiches and grinding into hamburger. Fried chicken served out of boxes, buckets, or baskets requires that broilers meet specifications set by franchise restaurants—insuring good market demand. The benefits of eating-out are coming to the farmer with fruits and vegetables, too, but to a more modest degree.

Crops

WOOD BY-PRODUCTS—New uses for wood by-products have been devised since people have become more concerned about air pollution. Bark and sawdust, that traditionally were burned as fuel, are now being shredded for horticultural mulch. Bark is also used as ground cover on foot paths in parks and playgrounds. In addition to using sawdust as livestock bedding, it is being fed to ruminants. Pressing sawdust into fireplace logs, insulation boards, and building products are other growing uses.

PUNCH-PLANTING BEETS—A sugar beet planter with improved uniformity of seed placement and speed of operation has been designed by University of Wyoming agricultural engineers. The planter employs a hole-punching wheel to make cone-shaped holes into which the seeds are dropped. Seeds are metered out and planted at a uniform depth. Precision planters will make mechanical thinners more effective as existing thinners require uniform plant spacing for proper operation.

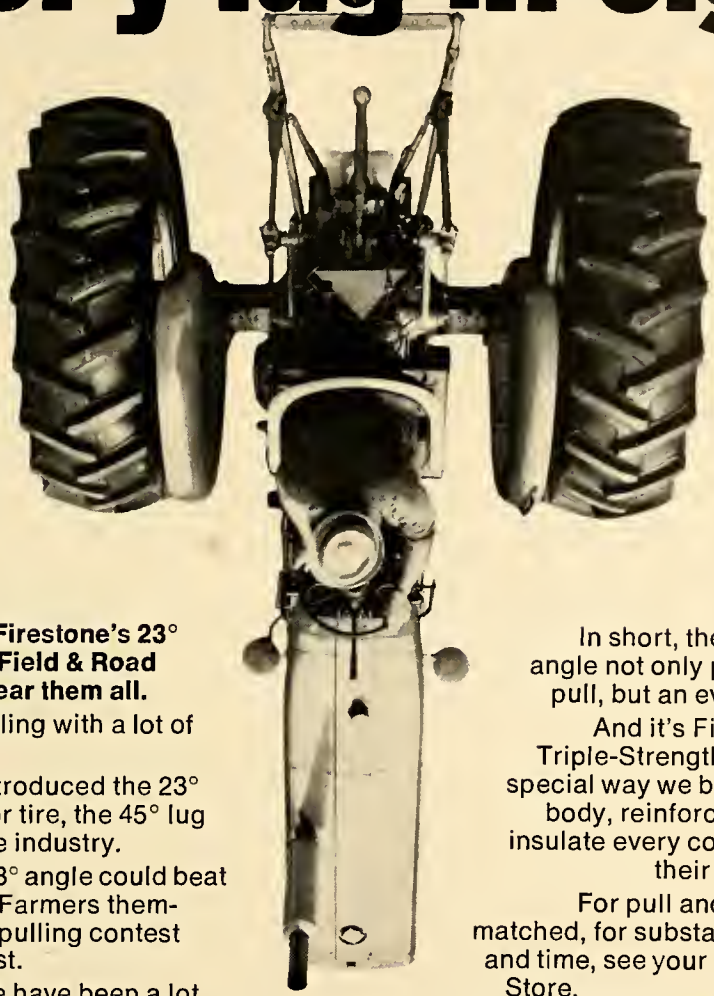
POLLUTION-RESISTANT PLANTS—USDA scientists and others are searching for air pollution-resistant plants. They are especially interested in finding plants not affected by photochemical oxidants. These oxidants, ozone for example, are toxic to plants and form by the action of sunlight on nitric oxide, nitrogen dioxide, and other hydrocarbons emitted from the combustion of fuels. Current crop losses due to air pollution are estimated at more than a half billion dollars.

Management

FARM CREDIT—The Farm Credit Board, national policy making body for the cooperative Farm Credit System, has adopted a new objective. Now that the System is completely farmer-owned, the objective will be to improve income and the well-being of American farmers and ranchers. This will be done by furnishing adequate credit to them, their cooperatives, and farm related businesses.

OLD BUILDINGS—An old or un-used barn can make the owner money by tearing it down says an extension economist at Ohio State University. The costs of tearing down these buildings and removing the materials from the premises can be listed as a tax deduction. In addition, the undepreciated value of such buildings can be taken as a business loss, and the building can be removed from tax duplicate—thus lowering real estate taxes. Including insurance and interest savings, a farmer would save over $500 in ten years. At the same time, he can improve the appearance of the farm and add productive land to it.

We just licked every lug in sight



Latest tests show Firestone's 23° angle All Traction Field & Road tires outpull, outwear them all.

We're used to tangling with a lot of lugs.

When we first introduced the 23° lug on a rear tractor tire, the 45° lug was standard in the industry.

We proved the 23° angle could beat *any* 45° angle tire. Farmers themselves proved it in pulling contest after pulling contest.

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In short, the strong, simple 23° angle not only produces maximum pull, but an even pattern of wear.

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For pull and wear that can't be matched, for substantial savings in fuel and time, see your Firestone Dealer or Store.

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The 23° All Traction Field & Road, original equipment on many new tractors; the heavy duty 23° Deep Tread; the 23° Field & Road, a quality economy tire. For traction and wear figures on all these tires, write: Dean Weidman, Manager, Farm Tire Sales, Firestone Tire & Rubber Co., Akron, Ohio 44317.

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Check Out Corporations

As your enterprise expands it behooves you to find out how a corporation could fit into your business. Here's the follow up on the June-July 1970 "entry barrier." ***By Ron Miller***

WHAT can incorporating do for your agricultural enterprise?

This way of thinking is especially important when considering the incorporation of a farm or business. And the typical characteristics of a corporate business structure are the biggest reasons for this concern. As you will see in the following characteristics of a corporation, the effects of incorporating vary greatly with the circumstances of each farm and family.

• **Limited Liability.** This means that liabilities from suit or business transactions of a corporation can only be satisfied and met with corporate assets, not yours. Thus, a shareholder is not responsible for other shareholders' debts, and you cannot lose more than you invest in a farm corporation. If you have other large personal assets to protect than the farm, the limited liability feature of corporations will be important to you.

The importance of limited liability also depends on the amount of risk involved in the business and the degree to which you trust your business associates. Being that farm corporations are usually owned by family members these reasons may be of lesser significance than in regular corporations.

Breaking the entry barrier

• **Financing Business Activities.** Incorporating can aid in establishing a more flexible financial plan often needed to provide for large farm investments. For example, two or more families or persons who cannot actively farm can pool assets and buy the necessary livestock and equipment to farm economically. They can purchase shares in a corporation in different forms—money, property, and services—of which the board of directors will establish the value contributed by the shareholder.

Additional capital for a corporation can be obtained from banks, insurance companies, and cooperative agencies. Since they furnish debt capital, not stock capital, they do not become owners. However, should a corporation liquidate, the bonds or promissary notes of the creditors will be paid off before the assets of the farm corporation are divided among the shareholders.

• **Taxation.** Incorporating will affect the taxing of property and your social security payments. Regular corporations are generally taxed at a less favorable rate than small businesses are. But by incorporating as a Subchapter S corporation (See "Breaking the entry barrier" in the June-July, 1970 issue.) you can avoid some of the high-tax disadvantages of regular corporations. Under this system your share of the farm income, losses, or capital gain will be taxed at personal income rates. With expert legal advice you can save tax dollars by incorporating a large operation.

Reasonable employee salaries are deductible expenses as are tax-free medical and sick pay by the corporation. Retirement plans can also be set up so that payments toward your retirement by the corporation are deductible immediately when paid, but payments by an employee are not taxed until he receives the funds as retirement.

• **Unlimited Life.** A corporation's life is not affected by the death of stockholders, officers, and employees. Shares can be bought, sold, or transferred to the next generation without interrupting the corporate business and inheritance tax provisions only affect the employees personal estate. Thus, a corporation exists until it is dissolved and its assets are liquidated

• **Transferring Assets.** To relieve the burden of inheritance taxes a stockholder can transfer shares gradually to other family members. At the same time, he can retain an interest in the farm corporation while keeping the farm intact.

Stockholders can legally present tax-free interest gifts up to $3,000 to each beneficiary each year according to Internal Revenue Code. Similarly, yearly and lifetime exemptions can be doubled for gifts to third persons by a husband and wife even if the property is owned by just one spouse. Hence, incorporation permits transferring land as gifts in the form of stocks without dividing the farm into several unproductive parcels.

• **Conclusion.** Forming a corporation will cost legal fees, a charter cost, and some expense to maintain. Therefore it is essential that the general characteristics of corporations work for you, not against you.

If you operate a large farm, own considerable outside assets, and have many family members involved in the farm business, incorporation may be the best arrangement. However if the loss of a major shareholder would cripple the farm operation and stockholders own few other assets, incorporating alone will not boost or perpetuate the farm business.

Have a talk with your banker, tax advisor, and attorney. You might find a cheaper and simpler way of strengthening your farming or agri-business position. But at any rate, you can break the entry barrier with a clearer picture of how a corporation could fit into your operation.

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Randall Lewis Adel, Georgia

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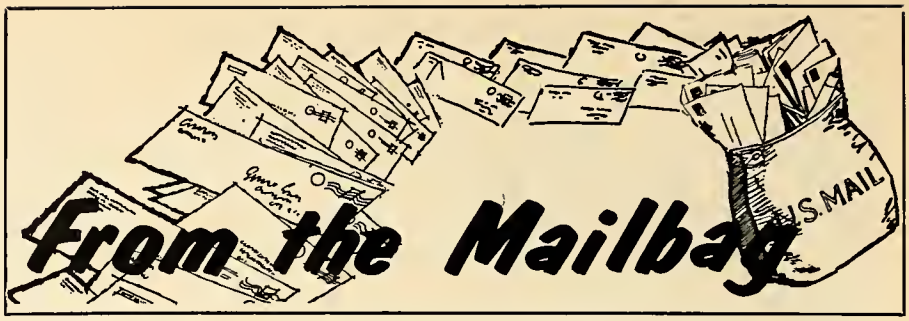


Yuma, Arizona

You may find it particularly interesting that the young man, Mr. Keith Karnok, who appeared on the front cover of your April-May issue is one of our outstanding students in turfgrass management. He is dedicating himself towards reaching his goal of becoming a golf course superintendent. He has done very well in his course work and has established a very good reputation with his employers at the Yuma Golf and Country Club where he works in a cooperative program.

George Brookbank
Professor of Agriculture
Arizona Western College

Kansas City, Missouri

In case you don't have them, the dates for the 1970 American Royal Livestock and Horse Show are October 16-24. FFA activities will be from Monday, October 12, to Friday (Future Farmers Day), October 16.

Allen C. Wardrip
Public Relations Director
American Royal Association

Waldorf, Maryland

I was most pleased upon reading the letter from the editor concerning the FFA Alumni Association that is being proposed. I support the move 100 percent.

I myself am no longer an active member of the FFA. I enjoyed the years I spent in the FFA. It's a great organization! I for one would be proud and delighted to become a part of a formal organization in support of the FFA.

John B. Langley, Jr.

David, Chiriqui, Panama
(Translated from Spanish)

I hope that when you receive this letter everyone is fine (healthy).

I am writing you because I have found out that this is the first Future Farmer Association that was founded in the state of Virginia.

The reason for my writing is to interchange ideas, post cards, and everything that I am a member of the Future Farmers of Panama (FFP) Chapter of Colegio Felix Olivares Contreras.

I am grateful to the students that would like to have a friendship with me; I beg you to write me in Spanish; but if you cannot do it, do it in English-Spanish.

José E. Cordova

Bloomington, Illinois

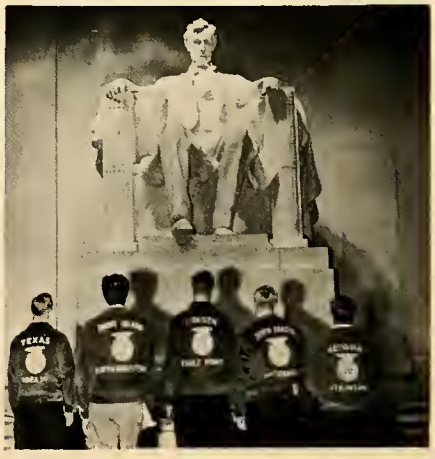
I have just finished reading the April-May edition. I was especially pleased to see the way that you have expanded the section entitled "FFA In Action." This is precisely the type of thing that I believe is very meaningful to local FFA members and to FFA leaders on the chapter, sub-state, and state level.

Kenneth G. McMillan
Assistant to the President
Illinois Agricultural Association

Preparing to Lead

Over 400 chapter and state FFA officers improved their leadership skills at the National Conferences recently held in Washington, D.C. Fifty advisors also attended the week-long programs.

FFA officers visited places like the Lincoln Memorial (shown), the Capitol Building, Mount Vernon, and National FFA Center. They had lunch with Congressmen and enjoyed sport activites.



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3. We've made the inside wall absolutely straight; so the wad seats perfectly every time. The seal is perfect...the power is kept behind the shot (where it belongs).

4. What can we say about the powder we use? Just that it's specifically blended, to our own specifications, to meet the requirements of each load. And it's formulated to burn clean, provide light recoil and consistent pattern performance round after round.

5. There are other primers, but ours is the only one marked "Kleanbore" (the name says a lot). "Kleanbore" primers provide instantaneous ignition...require 50% less firing pin energy. Because we match the primer to the load, misfires are virtually eliminated.

6. If reloading is important, you should know that the special plastic formula we use for our cases can give shooters more reloads than any other shell. No other shell can stand as many mouth flexings.

7. Remington shells are green. Peters shells are blue. But we don't own the patent on nice colors. We wish we could.

8. "Power Piston" wads are available in 12, 16, 20, 28 and 410 (2½") gauge "Express" and "High Velocity" loads . . . in 12, 16 and 20 gauge magnum loads . . . and in 12, 16 and 20 gauge "Shur Shot" and "Victor" field loads.

9. Remington and Peters shells perform beautifully in all kinds of shotguns. For rifles we make something else.

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Do-It-Himself Savings

This FFA member uses his mechanical ability to cut his equipment costs to a minimum.

By Ron Miller

ANY savings you can realize in buying and upkeep of machinery these days means extra large reductions in production costs. Take the case of FFA'er H. Charles Bachman of Johnstown, Ohio. By buying unassembled machinery and constructing his own buildings he has done just that.

Charles has assembled cultivators, planters, grain screens, storage bins, a silo unloader, and a host of small equipment. Working with his father he also set up two grain dryers—a 3,200 bushel one and a 6,500 bushel unit.

The young mechanic and his father have saved even more by constructing their own livestock equipment. Their accomplishments include building two barns, painting four barns, and making calf pens, cow stalls, hay feeders, stock racks, and an automatic silo feeder bunk. Their two silos stand side-by-side so they devised an "I" crossover beam for switching the silo unloader from one to the other.

The partners own the 425-acre home farm and operate 625 acres in total. Their main crops are corn, soybeans, and hay along with some wheat and oat acreage. Until four years ago when the family found out that Mr. Bachman had cancer, Charles and his father were milking 45 cows. Now they raise bred dairy replacements, selling about 150 to 180 fresh heifers annually to dairymen.

Charles and Mr. Bachman have somewhat of a unique partnership and share equally the management responsibilities. Charles furnishes approximately 35 percent of the labor and owns 15 percent of the machinery. In return the young farmer receives 15 percent of the net proceeds from the farm operation and 50 percent of the custom work receipts.

With this large farming business, it takes a full line of machinery and someone to keep them running. Charles does much of the general repair and maintenance on the field implements as he is the one who operates them. Many jobs like sharpening knives on the chopper, adjusting knotters on the baler, or rebuilding the straw chopper on a combine are second nature to him.

The young mechanic has overhauled tractor, combine, car, and truck engines. In addition, he installed a new cab on one combine and fabricated a fiberglass cab on a tractor. His mechanical work also includes assembling an auxiliary axle on their two-ton truck.

Over all, Charles averages over 500 hours of maintenance, repair, and improvement work each year.

In FFA Charles won the Chapter Star Farmer award as a member of the Big Walnut Chapter, Sunbury, Ohio, under the guidance of Advisor Gary W. Bauer. He also received FFA Foundation proficiency awards in farm mechanics at the chapter, district, and state levels before winning the National Agricultural Mechanics Proficiency award.

Charles participated in parliamentary procedure contests, was a member of a first place district land judging team, and exhibited woodworking and crops at the Ohio State Fair. He sold more slow moving vehicle signs than any other chapter member and entered the high school science fair several times.

Since graduation the young farmer has taken over most of the managerial responsibilities of the farm. He attends Young and Adult Farmer meetings and maintains active membership in many farm and livestock organizations.

Here Charles tightens down the rod bearings on a tractor engine he overhauled. He owns over $1,500 worth of tools.

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Those Amazing Harvesting Machines

In the last few years cranberry growers have experienced phenomenal mechanization. The wet picker shown to the above left uses a rotating wheel to detach the berries from vines. Berries are then floated to shore and picked up by loading equipment.

Some wet pickers are self-propelled and pull a "boat" which holds up to 1,000 pounds of berries. The boats are pushed ashore and lifted by crane onto trucks. Wet picking is the most efficient method since nearly 100 percent of the berries are harvested.

Although some of the berries fall into the vines when dry picking, some machines show great promise. To the above right, for example, is a dry picking harvester being used in Massachusetts where more than half the U.S. crop is grown. Cranberries are picked directly into burlap bags or boxes.

Both cranberry harvesters shown here were developed by the University of Massachusetts.

Wonder-working machines are opening up a new era in harvesting of fruits and vegetables. ***By Ron Miller***

IN the early part of this decade economists foresee a big speedup in the mechanization of fruit and vegetable crops. Many of the problems that hindered machine harvesting progress have recently been solved through engineering and plant breeding.

Currently, only about 2 percent of the U.S. fruit crop is harvested by machine. In the next five years, however, the USDA predicts that nearly one-fifth or 20 percent of the fruit harvest will be mechanized. Private concerns estimate an even higher rate of mechanization, largely because of decreases in labor supplies. At the same time, fruit production is expected to increase by 25 percent.

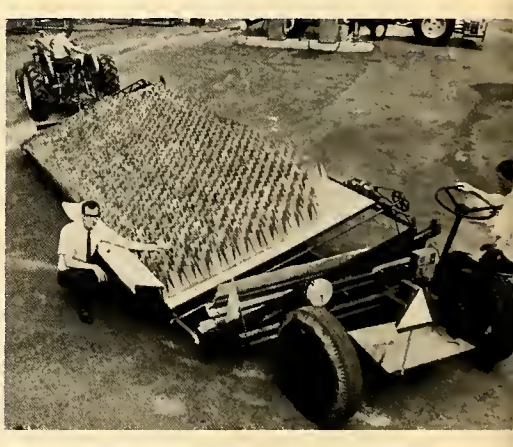
According to Economic Research Service estimates, 58 percent of the total U.S. vegetable harvest is now mechanized. But by 1975 the USDA anticipates that 73 percent of the nation's vegetables will be harvested by machine. And this will happen in spite of an estimated 11 percent rise—eighty million tons—in vegetable production each year.

To accomplish such a rapid increase in mechanized harvesting many machines must be past the drawing board stages. And they are. The implements shown and described in this article illustrate how dramatically mechanization will change the harvesting of almost any fruit or vegetable crop imaginable.

One of the toughest crops to machine harvest has been the lowbush blueberry. Nevertheless, the self-propelled blueberry harvester at the left, developed by the University of Maine, is now being manufactured by Chisholm-Ryder, Inc., Niagara Falls, New York. The harvester is three feet wide and mounts on a 10 h.p. garden tractor that is operated in the reverse direction. It scoops the berries up with a reel operating against the direction of travel and conveys the berries to a container. This lowbush harvester operates at speeds up to 1½ miles per hour and can pick three to four acres a day.

For highbush blueberries, Blueberry Equipment, Inc., South Haven, Michigan, manufactures a machine that can pick ½ acre an hour with a crew of three. It looks somewhat like a space vehicle and costs about $32,000.

Once plant breeders developed tomatoes that hold their fruit high, produce harder and smaller fruit, and ripen uniformly, designing a harvesting machine progressed at a rapid pace. A new machine, developed by Penn State University, is shown to the left. It incorporates an electronic sorting system that selects ripe fruit by color. Standard harvesters generally utilized 10 to 15 men for sorting.



One of the first fruits to be harvested mechanically was the cherry. Cherry harvesters now sort out undersized fruit and allow two men to harvest 25 trees per hour. Machines have already cut the cost of processing cherries to less than one cent a pound.

In California mechanical devices are already in use for harvesting cling peach varieties—the cooking or canning kind. On the other hand, work on harvesters for freestone or fresh market varieties grown in the Southeast is moving at a slower pace.

Yet, University of Georgia agricultural engineers are making progress on a harvester, shown above, that consists of 8 foot wide by 20 foot long platforms cov-

(Continued on Page 22)

GM
MARK OF EXCELLENCE

Monday thru Friday, Tom Schrieber analyzes things others can't see.

Scientist Tom Schrieber would tell you that nothing excites him like sailing. Except, perhaps his job at GM's Research Laboratories in Warren, Michigan.

Tom is in charge of a unique little piece of equipment called a Scanning Electron Microscope (SEM). With it he can magnify any surface structure, or the inside of porous solids, up to 50,000 times.

Although SEM is used primarily to evaluate new metals and fibers for future cars, it works equally well on wood, plant life, chromosomes and teeth. Put a human hair under SEM and you've got yourself a redwood.

While Tom is magnifying his mini-world, other interesting people at GM are working on such diverse projects as navigational computers for airlines, lunar surface vehicles and small, powerful batteries for lawnmowers.

Which all goes to prove that you can still do your thing and be a scientist at General Motors.

General Motors

Interesting people doing interesting things.

Increasing Power of Used Tractors

Powering-up that "tired" tractor can put new life into it and hold off the cost of buying a new tractor. ***By Melvin Long***

POWER output of many well-used tractors can be increased to a level approaching that of many of the new "higher-horsepower" models currently being sold. There are a number of power-packages or conversion kits now on the market which will do the job for various tractors.

Before deciding to have your tractor "hot-rodded," there are a number of factors that should be considered. First, the money spent on your present tractor will result in added power only. It will not give you the many convenience and productivity features that a brand new tractor may offer as compared to your present tractor. Examples of these include integral power steering, torque converters, power-shiftable transmissions, and multiple hydraulic functions.

Secondly, your existing tractor should have enough transmission-gear ratios available so that you can use the added engine power to operate existing equipment at a slightly greater ground speed. In general, it's not advisable to use the extra engine power by simply pulling larger implements at the same speeds you presently use.

Operating Principles

Power output of a spark-ignition engine is controlled by many different items. Among these are displacement, compression ratio, speed, spark timing, and breathing. In diesel engines, power output is affected by displacement, speed, and breathing. Some of these can be readily revised in existing engines.

Displacement. Displacement can be defined as the cross-sectional area of the cylinder multiplied by the length of the stroke, and that in turn multiplied by the number of cylinders. An increase in displacement increases engine output, if the other necessary parts of the engine are revised to use the added displacement.

Compression Ratio. This is the ratio of the volume above the piston when it is at the bottom of the stroke, divided by the volume above the piston when it is at the top of the stroke. In both cases, the volume of the combustion chamber is included. Increasing the compression ratio in spark-ignition engines causes the fuel-air mixture to be compressed more before ignition. This results in more power being produced when the mixture is ignited in the cylinder.

Compression ratio is also affected by the distance between the wrist pin and the top of the piston. If this distance is increased, compression ratio is increased.

So, it is possible to increase compression ratio in two respects with the use of over-size pistons.

Ignition Timing. Each design of engine has a spark setting which will give maximum power. Any setting which provides for ignition earlier in the cycle will result in knocking and early damage to the engine. Any setting later than the optimum setting will result in a smooth running engine, but it will be wasteful of fuel.

Breathing. This is the characteristic referred to by engineers as volumetric efficiency.

In spark-ignition engines, the fuel-air mixture is forced into the cylinders as a result of the partial vacuum produced by the intake stroke of the cylinders. However, since there is resistance to flow through the air filter, carburetor, and intake manifold, the cylinders never receive the weight of fuel which they are theoretically capable of holding. As the engine speed increases, the volumetric efficiency declines. It's just a matter of the fuel-air mixture not having enough time to get into the cylinder. With less fuel available for each stroke of the piston, the downward force and resulting torque is reduced.

In diesel engines, only air is forced into the cylinder by the partial vacuum produced by the intake stroke of the cylinders. On the compression stroke, the temperature of the air rises from the heat of compression. The diesel fuel is injected into the cylinder where it is ignited by the high temperature air. When the diesel engine is operating at partial load and speed, there is more air in the cylinder than is required for complete combustion of the fuel. However, as speed and load increase, the amount of fuel injected increases but there is less air available because of the decrease in volumetric efficiency. Thus, the limiting factor on power output in a diesel engine is the amount of air in the cylinder at the time the fuel is injected.

What's Available?

Several major manufacturers as well as independent manufacturers have kits available for increasing the power of the existing tractors. The exact methods vary and no one manufacturer uses all of these principles.

Displacement and Compression Ratio. If the engine has removable cylinder sleeves, it is sometimes possible to substitute sleeves having thinner walls for additional displacement. This results in a slightly larger bore and oversize pistons are then required.

Oversize pistons increase the compression ratio because of the fact that the volume of the cylinder above piston includes space in the cylinder head as well as in the engine block. The space in the head is not increased as a result of oversizing the cylinder bore. Thus, volume above an oversize piston at the top of the stroke is not increased in proportion to volume above the piston at the bottom of the stroke. It is also possible to provide these pistons with a greater wrist pin-to-top-of-piston distance.

So, a replacement set of sleeves and pistons can provide increased displacement and a higher compression ratio. The replacement pistons are generally made of aluminum and may have specially shaped tops to produce a greater turbulence in the air-fuel mixture.

Oversize replacement pistons are also available for engines having solid cylinder blocks. However, these blocks require a machine-shop cylinder reboring operation before they can be fitted with the oversize pistons.

A gasoline engine normally delivers as usable power about one-third of the total energy of the fuel consumed. The other two-thirds must be removed as heat. Thus, with an increase in engine

power, it is also necessary to carry away more heat energy. This is why the oversize pistons furnished as replacements are generally made of aluminum instead of cast iron.

Compression Ratio Only. One method of raising the compression ratio is to mill or place the head so as to reduce the volume of the combustion chamber. This method is often used to "hot rod" auto engines, but it is not recommended for most tractor engines. Another method of raising the compression ratio is to use a head gasket of reduced thickness. While the difference between the thickness of two gaskets may seem to be very slight, it is possible to raise the compression ratio by the method as much as one half a unit on some engines.

As the compression ratio is raised—regardless of the method used—the charge of fuel-air mixture burns more rapidly when it is ignited by the spark plug. Therefore, with increased compression ratio, the spark timing must be changed. The timing mark on the flywheel no longer applies. The timing should be set with the aid of a shop dynamometer, which provides a means of measuring power output.

Volumetric Efficiency. This factor may be improved by the installation of a new intake manifold arrangement. In spark-ignition engines, the power output of the engine depends upon the weight (rather than the volume) of the fuel-air mixture that reaches the cylinders. The same volume of mixture will weigh more if it is cooler. Thus, the "cold" type replacement manifolds are designed to provide less heating of intake portion by the heat from the exhaust portion. However, enough heat must be provided to provide for smooth operation of the engine at low speeds.

The amount of fuel-air mixture entering the cylinders is also affected by the height of lift of the intake valves. Raising the valves higher permits more fuel to enter. To do this, a special high lift cam can be installed to increase horsepower output.

In diesel engines, the drop-off in engine performance as speed increases can be avoided by forcing air into the combustion chamber. This process known as supercharging is not new, but only recently has it been applied to agricultural-type tractors.

A recent approach is that of using exhaust gases from the engine to drive a turbine-like fan wheel. Connected to the same shaft is a blower wheel which literally pumps the air into the engine.

The harder the engine works the more air it needs. Fortunately, more exhaust gases are also available to turn the turbine faster, so that it can provide the needed extra air. Therefore, the turbo-supercharger tends to be self-regulating. There's no need for operator control of the device.

With added engine power it is more advisable to operate tractors at faster speeds than to pull larger machines as tractor weight is basically unchanged.

Because the supercharger is driven by exhaust gases, the energy it absorbs reduces exhaust gas temperature by 120° to 150° F. at rated load. In addition, the need for a muffler is reduced, and in some cases eliminated.

The extra air which the supercharger makes available produces better scavenging, or cleaning out of the combustion chamber after each power stroke. Thus, the critical combustion chamber parts—valves, injector, and piston—actually tend to run cooler in a supercharged than in a naturally aspirated or breathing engine.

The excess of air supplied to each cylinder also serves other useful functions. The more complete combustion which it permits clears up the exhaust smoke; but, more important, the better combustion also increases fuel economy.

Another benefit unique to the turbo-supercharger is its ability to compensate for the effect of altitude on engine performance. Naturally aspirated engines suffer at high altitude because there is less air pressure available for forcing air into the intake manifold. In the turbo-superchargers however, the decreased atmospheric pressure permits the exhaust gases to drive the supercharger at a higher speed, thus, it compresses more air and forces it into the cylinders. In general, turbo-superchargers can maintain almost sea level engine performance up to altitudes of about 7,000 feet.

Precautions to Be Observed. You may well ask if the process of obtaining more power from your engine will make it "temperamental" and short-lived. There is no danger of this if the job is done properly.

One of the reasons for being able to raise the compression ratio is the steadily increasing octane rating of gasoline. With the increased octane rating, the compression ratio can be increased without producing detonation or "knocking." Regular gasoline now available has a higher octane rating than premium grade gasoline of a few years ago.

The increased power output will increase the load on the cooling system. This is one of the limiting factors on the amount that power output can be increased. This makes it very important that you keep the cooling system in first class condition to prevent overheating, resulting in severe engine damage.

The proper amount and correct type of crankcase oil becomes very important when the power is increased.

Cost of Conversion

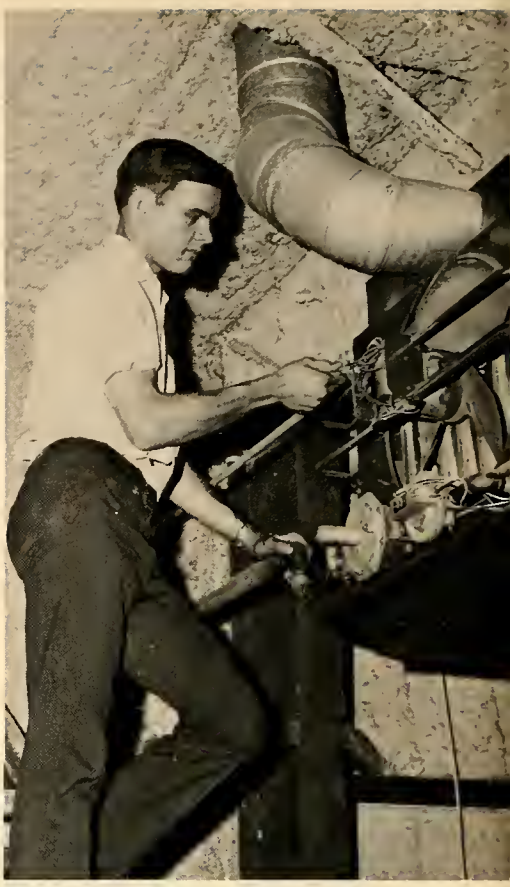
Normally any of the conversion methods which involve replacement of existing parts are performed only at the time the tractor engine is in need of a major overhaul. For example, if new rings, pistons, and cylinder liners are required to restore the engine to satisfactory performance, little if any additional labor is required to install the similar parts which will increase power output. The only additional cost is that of the special parts over the regular parts that would be used.

Piston-Cylinder Liner Kits. An analysis of the specifications and prices for piston-cylinder liner kits available from one manufacturer for a wide range of makes and models of tractors reveals some interesting comparisons.

(Continued on Page 20)

Wiring the Town

Here's an FFA member who used electricity to "light up" his income and his future.



Here Dan completes the wiring installation for the vo-ag heating system.

THIS FFA member knows his electricity; and his contest placings affirm this fact. Competing in farm electrification and shop contests that require written exams and practice wiring, Danny Mitts of Morris, Oklahoma, won top individual honors three times.

Dan puts his knowledge to practical use, too. Installing fluorescent lights in the grade school, rewiring the community center and contracting to wire the new bank in Morris show how much confidence the citizens have in Dan's work. Other accomplishments made by him around the town include planning and wiring electrical systems in 24 homes and a self-service laundry. He also installed the lighting and electrical outlets in his church.

"I got my biggest thrill by wiring the parsonage where we live," says Danny. "What began as just tinkering with electricity in grade school really came in handy." His father, a minister and former FFA member, encouraged him to enter vo-ag and FFA.

His big break came when he started to work for a local electrician. Dan did a variety of service work—trouble shooting faulty home circuitry, installing new wiring, and repairing appliances. He used his ability to wire grain storage systems, fans, and motors on farms and converted gas driven oil pumping units to electrical operation and installed time clocks on oil wells.

Later the young electrician began to contract some jobs on his own. When contracting he takes into consideration the distance to the job as well as the supplies and estimated labor he will need. Danny buys his wire and components at wholesale prices and markets a few electrical products outside the contracting business. He keeps records on each electrical job.

Dan's business has grown so fast that he has been able to purchase a half ton pickup and a complete set of his own electrical tools. With his job, contract work, and a few head of beef cattle and some hogs, Dan's income steadily increases.

The young electrician made significant contributions to the Morris vo-ag department. Installation of a heater unit, ten 220-volt welder outlets, and a 400-amp entrance box in the vo-ag building have been attributed to Danny's labor. As a slave of the chapter auction he wired a garage for the buyer.

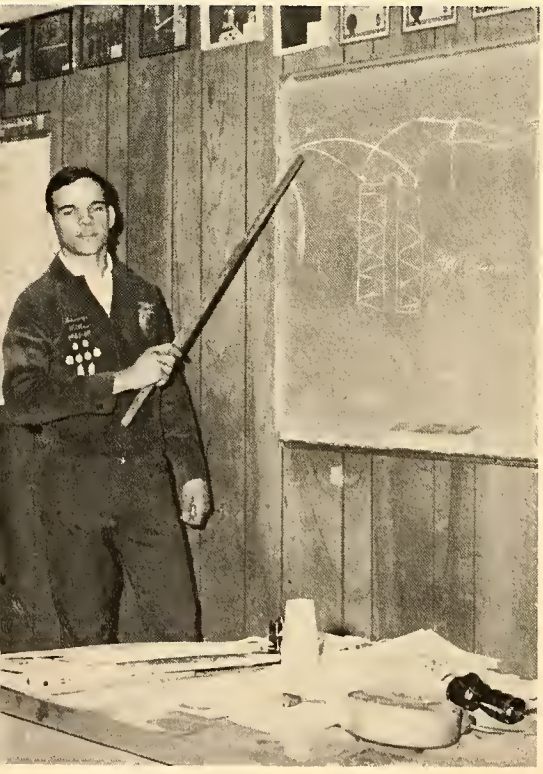
Other jobs like putting central air conditioning and heating units in houses —including Advisor Bill Bearden's home—and installing service entrances to mobile trailers—one of which was the home of Advisor Joe Ring—were also completed by the FFA electrician.

Among Danny's laurels in FFA are three local farm and home electrification awards and the Foundation's National Electrification Proficiency plaque. He received the local farm safety award and won two chapter public speaking contests—undoubtedly talks on electricity. Danny, a member of the chapter team that won the district competition in electricity, also gave lectures to younger members on the fundamentals of wiring a home. Serving as coach of the Morris farm and home electrification judging team speaks well of his electricity know-how and ability.

Danny served as an FFA chapter and Sunday school officer and won the chapter scholarship award. Being an outstanding athlete in high school football and baseball, he continues to remain active by playing baseball and officiating grade school football games. He is a member of the Honor Society.

Dan plans to study electrical engineering at Oklahoma State University.

Dan presented electric demonstrations at civic, farm, and chapter meetings.



"When a man owns the same pair of Levi's blue jeans for eight years, he can't help but grow attached to 'em. Maybe I should get jeans that don't last so long. Then parting wouldn't be so rough. But I figure... it's better to've had Levi's and lost them, than never to've had Levi's at all."
LEVI'S® JEANS AND JACKETS
LEVI'S
The word "Levi's" is a registered trademark of Levi Strauss & Co., San Fr

Kids and Dads*

Get in on the terrific new Winchester-Western

National Rim Fire Tournament!

Winners receive
Winchester-Western
Shooting Medals.

Open to boys and girls everywhere, ages 10 to 18.

It's easy to compete...easy to win.
Here's how:

1. Cut out the official Winchester-Western Rim Fire Tournament 50 Ft. Target, reprinted full size at right, or pick up one at your local firearms dealer.

2. Set up your own target range by measuring off fifty feet from your firing line to this target, placed in front of any safe backstop . . . we suggest a clay bank, a sand pit, or the end of a large log. (Remember: the range of most 22 ammunition is one mile).

3. With any 22 rifle, equipped with any type of sights, fire two shots at each of the five bull's eyes on the target, using Winchester or Western 22 ammunition. Know your rifle thoroughly before shooting, and observe all rules of safety.

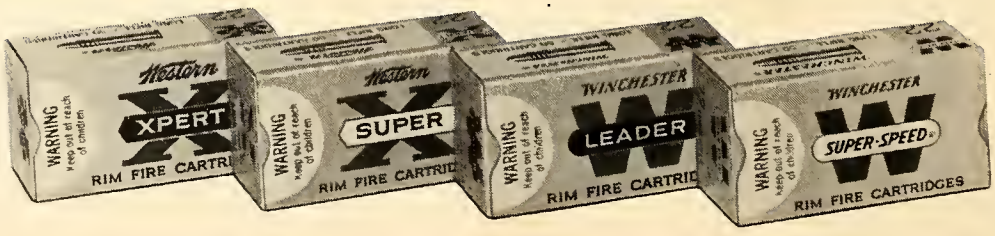
4. Have your shooting witnessed and verified by your Dad, or another adult. Then add up your score and print it along with your name and address at the bottom of the target. Mail lower portion to Winchester-Western Rim Fire Tournament at the address shown, along with one Winchester or Western 22 boxtop, or facsimile thereof.

5. If you score between 50 and 69, we'll send you a special Bronze color Winchester-Western Winner's Medal. For a score of 70-89, you qualify for a Silver color Medal. Shoot a score of 90-100 and we'll rush you a Gold color Medal. Each Medal is an authentic shooting badge you'll wear proudly for years on your jacket or hat.

Enter as often as you like. Tournament starts immediately, and closes at midnight, December 31, 1970. Void where prohibited by law.

Don't wait. Start right away by having dad load you up with Winchester or Western 22s.

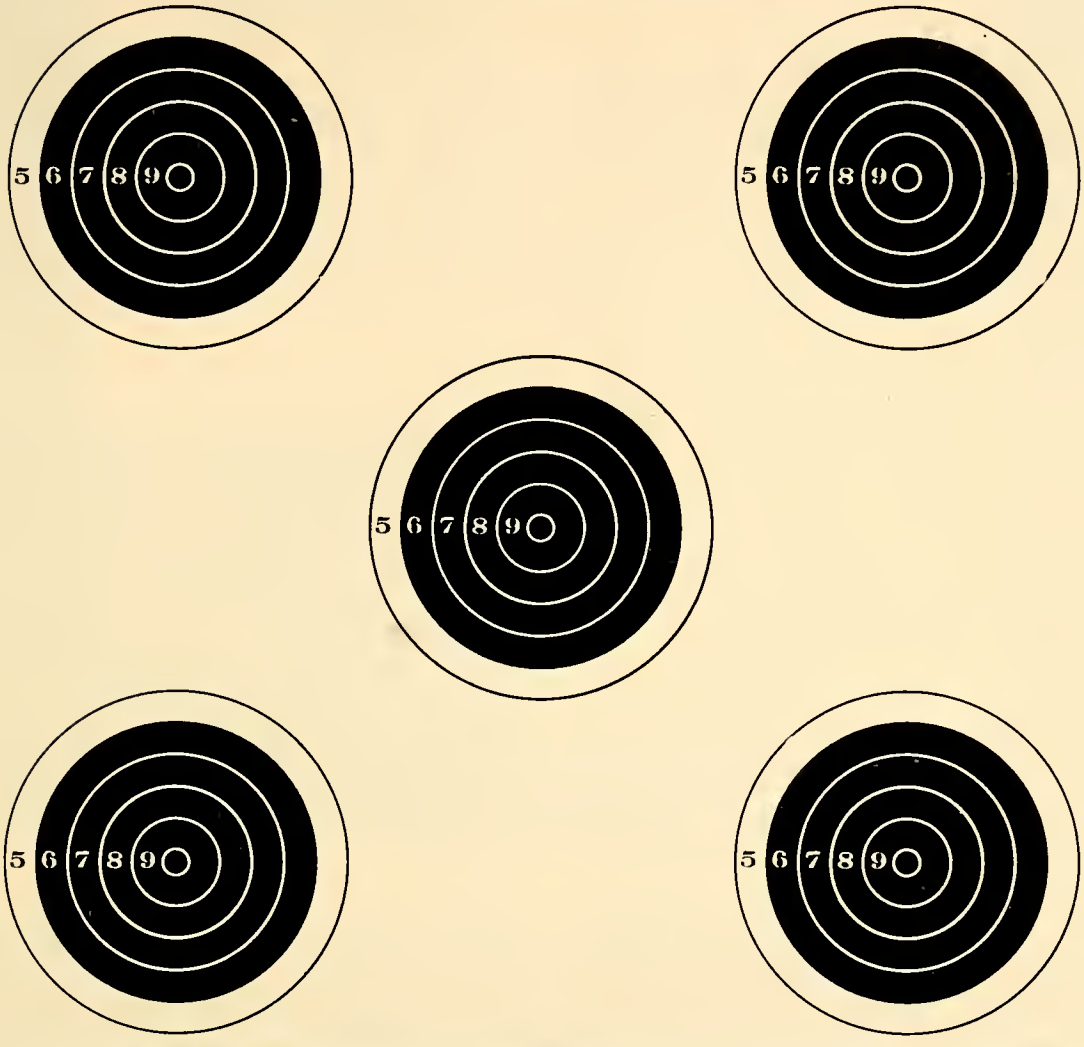
Then zero in on a whole new shooting match of Winchester-Western medals and fun. Don't miss out on a great deal in good sportsmanship and outstanding 22 shooting enjoyment.



**Dad: remember you're the one who must pick up the ammunition for your son or daughter.*

OFFICIAL WINCHESTER-WESTERN
50 FT. TARGET

National Rim Fire Tournament!



Shoot two shots at each target from fifty feet. Shots touching line score higher value.

CUT ALONG THIS LINE

Mail this coupon to Winchester-Western, Box 500, North Haven, Conn. 06473

Name_____ Age_____

Address_____

City_____ State_____ Zip_____

Adult Witness_____

Kids: Don't forget to enclose one Winchester or Western 22 boxtop, or facsimile thereof.

Score

Score	Award
50-69	Bronze Color Medal
70-89	Silver Color Medal
90-100	Gold Color Medal

WINCHESTER-Western.

Soldering Shortcuts

By Glen Stillwell

THE electric soldering gun, now so universally used for quick soldering, can be a more convenient device if provided with its own wire solder supply. The same holds true of any soldering tool.

To make such a feeder, attach a common spool (the spool should turn freely) to a simple angle bracket by means of a thin bolt. Fasten the other end of the bracket to the spring eye of a clothespin making use of another thin bolt. Attach the entire feeder to your soldering tool, using a hose clamp or other means. For easier handling of the solder place a piece of tubing—a ballpoint pen barrel is satisfactory—in the jaws of the clothespin.

If you do not wish to use a feeder, time can be saved by keeping all soldering items together by making a soldering center. A discarded phonograph turntable is ideal for this purpose.

Insert a long bolt through the center hole in the turntable. Fasten a piece of flat iron (or plywood strip) on the bolt with a bushing between the turntable and the iron strip. Tighten the strip against the bushing with a nut. There should be at least one inch of the threaded portion of the bolt projecting above the strip. This will make an axis for a spool of solder.

The strip is used for holding clamps of various kinds which hold items to be soldered. In addition, the turntable makes an ideal tray for holding tiny lugs and small parts so that they won't become misplaced, as well as a soldering "backstop." Soldering paste or cleaning compound may be kept in a 35mm film can.

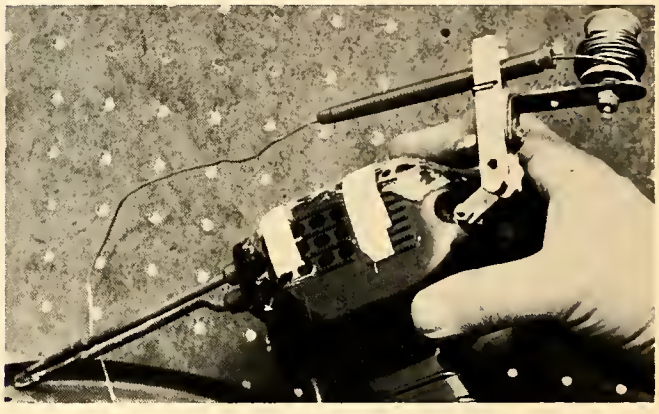
A strong magnet can be added to this soldering center. This can be used as an extremely flexible clamp for soldering wire ends or attaching lugs. Since most things to be soldered are non-magnetizable, this clamp is used in connection with a "keeper" made from a piece of strap iron. A suitable heavy-duty ring magnet (ideal for this purpose) can be obtained from a discarded TV focus coil. However, any permanent, heavy horseshoe magnet will do.

For convenience, and its protection, the soldering gun or iron should be kept in a holster.

A flat sided, quart-size, varnish can is suitable for holding the soldering gun. Spin off the bottom of such a container, and notch it at one of the narrow sides for the gun handle. The notch for the gun handle should be on the opposite side of the screw cap opening. Fasten the holster in a wall insert, at a 45-degree position fastened to the wall, or at one end of a bench. The soldering gun tips will easily project through the former screw cap opening of the can.

For a soldering iron, a holster can be made from a frozen fruit juice can by removing both ends to make a tubing.

This soldering wire feeder makes soldering much easier.



Increasing Power of Used Tractors

(Continued from Page 15)

In general the power output of older tractors—in the 10 to 15 year range—can be increased more, percentage wise, than can the output of later model tractors. However, the actual increase is often greater in late-model large tractors.

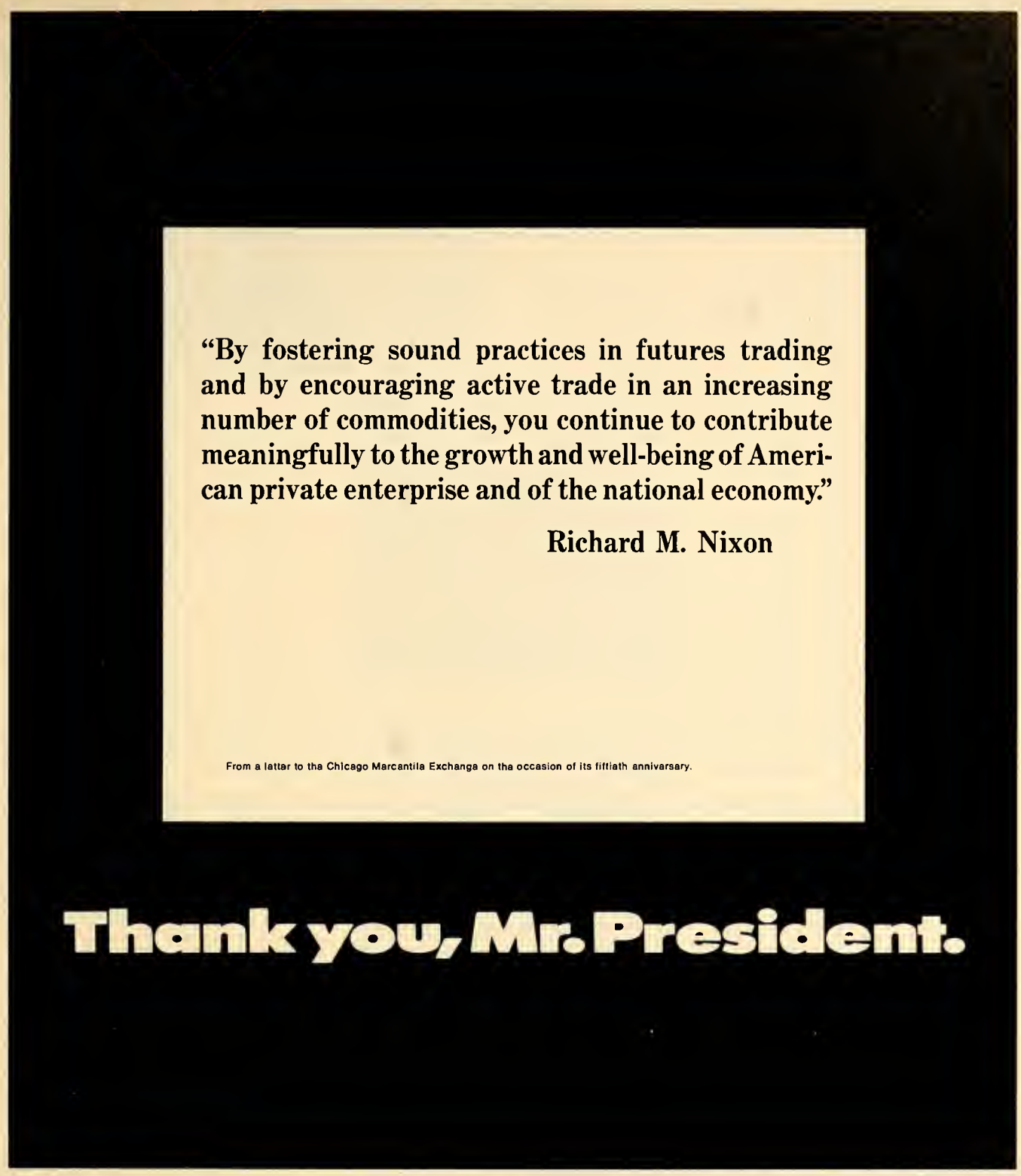
A comparison of list prices of the kits versus promised increase in power reveals a wide range of the cost per horsepower increase. In several instances, the cost is less than $5 per horsepower. In other cases, the cost may range as high as $75 per horsepower. However, the cost of the conventional parts must be deducted from the basic cost of these special parts to arrive at the true cost of increasing the power output of the tractor.

Actual amount of power increase also varies widely. In some cases, it is less than 10 percent of the original horsepower. In other cases, the increase may be as much as 40 percent of the orginal horsepower.

Superchargers. Use of these units is limited to current and late-model diesel tractors. Price, including installation, is approximately $500. For this, the increase in tractor power output ranges from about 13 to 26 horsepower—depending upon the size of the tractor. In some cases the air cleaner must also be replaced with one of larger capacity to accommodate the extra volume of air being used by the engine.

Here, again, this extra power should be used in the form of higher speed in field operation rather than in pulling larger implements at the same speed. Experience to date also indicates that premature failures caused by overloading of tractor parts has not been a significant problem.

No particular special service or maintenance is required by these add-on superchargers. Lubrication is provided by a connection to the engine crankcase lubricating system. Since the speed of the rotating shaft may be as high as 80,000 rpm, it's essential that the bearing have an adequate supply of oil. To help insure this, the time between engine oil changes should be reduced about 25 percent from that originally recommended for the tractor. Conscientious servicing of the oil supply also tends to provide an additional margin of protection for the engine parts which are more highly loaded as the result of the use of the supercharger.


"By fostering sound practices in futures trading and by encouraging active trade in an increasing number of commodities, you continue to contribute meaningfully to the growth and well-being of American private enterprise and of the national economy."
Richard M. Nixon
From a letter to the Chicago Mercantile Exchange on the occasion of its fiftieth anniversary.
Thank you, Mr. President.

We know a lot of people agree with you. Our trading volume approached forty billion dollars last year—and it's still growing.

We think this remarkable success stems from our ability to serve large segments of the nation's economy in a variety of beneficial ways. For the producer of beef, pork, eggs, potatoes and lumber, we offer a form of price insurance that is unavailable any place else. For large consumers of these commodities, we offer similar protection. To the man who trades commodities for private gain, we offer a regulated, liquid marketplace. To the public we offer the fastest communications network for dissemination of price and market information.

Putting all of these functions together tends to have a stabilizing effect on a major portion of the U. S. economy.

That's something we can all take pride in, Mr. President.

CHICAGO MERCANTILE EXCHANGE
110 North Franklin Street, Chicago, Illinois 60606

Those Amazing Harvesting Machines

(Continued from Page 12)

ered with pyramid-shaped, sponge rubber. Peaches fall into the sponge rubber cups, the platforms rotate underneath, and the peaches are deposited into a padded trough at the end of the platform. The only problem remaining to be solved is spillage.

Another model, developed by Clemson University, harvests at a rate of one tree per minute. It is self-propelled and has hydraulic shakers, padded catching surfaces, and 18 foot square platforms. In tests, 85 percent of the fruit was undamaged, about 9 percent slightly injured, and 6 percent was considered severely damaged. Most of the injured fruit, however, was over-ripe.

In the apple industry, experimental work is in full swing to perfect harvesters that range from fully mechanized versions to man picked, semi-mechanical types.

At Cornell University two apple pickers are being tested. One model works similar to peach harvesters in that it goes entirely around the apple tree. Once shaken loose, the fruit is caught on slanted frames with deceleration strips and delivered to a water collector box. The other version uses two cylinder drums with 3 foot long padded thongs to stroke the apples loose, catching them in the box.

Penn State engineers are currently developing a low-trellis-hedgerow apple picker that operates much like grape harvesters. To illustrate, a Chisholm-Ryder grape harvester shakes the fruit from the vines with a rotating spiked wheel that makes 500 five-inch strokes per minute. The machine picks at a rate of one to two acres per hour, comparable to the pace of 40 men.

At Washington State designers are testing an apple picker that steers itself. The apples are hand-picked by four men and conveyed into bins. Moreover, manufacturers are selling single man self-propelled units for just under $3,000. These units permit the picker-operator to lift himself up, down, forward, or backward from a platform lift.

The citrus harvest has also been greatly accelerated by one-man pickers. For example, on some machines the operator regulates the lift which is mounted on a truck chassis. The harvester does the rest —picking, catching, and conveying the fruit to a 64-bushel trailer pulled by the truck. One man and a machine can average about 20 bushels per hour, including unloading onto semis, with minor fruit damage—only 2 to 5 percent.

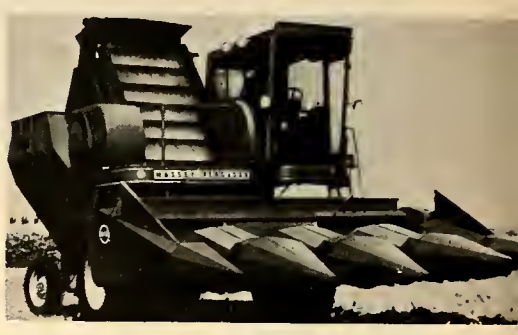
Oregon State University just completed construction on the strawberry harvester, shown below, this past spring. To facilitate the possibility of harvesting strawberries with a machine, plant breeders had to lend a helping hand by developing strains that rippen uniformly. The main problem foreseen by engineers in testing the machine will be to remove the stems and caps from the berries as they are when hand picked. The close-up shows the picking fingers of the harvester.

Meanwhile, machines have already revolutionized the blackberry harvest in Oregon. Similar feats are expected with the harvesting of raspberries as Washington State engineers complete tests on a harvester soon to be commercialized.

Snap beon harvesters now in use have enabled California producers to double their production since 1965. Two pickers, like the one above built by Ford, can harvest 10 to 15 acres per day into the bulk bins attached to the pickers. Beans are hydraulically dumped into semi-trailers.

Many other patented machines are on the market for harvesting garden crops. For example, an onion harvester, made by R. G. Bruner Manufacturing Company, Warren, Michigan, handles onions in bags, baskets, or giant pallet boxes. It can also be adapted to harvest carrots, red beets, and turnips.

Cucumber pickers now in operation give top results at an acre and hour rate. Cabbage harvesters, in use for several years, also harvest up to one acre per hour. Head lettuce harvesters that work on the same principle as cabbage harvesters will be manufactured soon.



A few years ago, pea and lima bean combines arrived on the vegetable harvesting scene. Shortly afterward, 2-row sweet corn pickers went into action.

But now, Massey-Ferguson has introduced a 4-row self-propelled sweet corn harvester, above, with a built-in 3-ton hopper that eliminates the need for trailing wagons. And, the hopper can be unloaded in three minutes to waiting trucks or on-the-go. In addition, the new sweet corn combine cleans corn silks and leaves from the ear with a high blast cleaning fan. Two heads are also available—one for handling 30 and 32 inch rows and another, that can be changed within five minutes, for picking 36, 38 and 40 inch rows.

One fast digging potato harvester, manufactured by Ford and now used by producers, utilizes an air blast principle to separate spuds from rocks.

But the new potato harvester pictured below could revolutionize the types of machines used in the future. Two features —a vibrating digger and a stone and dirt clod eliminator—will help reduce injury to potatoes. Oftentimes as much as a 50 percent loss is suffered by growers due to storage rot caused by mechanical injury.

The main injury prevention technique of this machine, however, is a water bath. Besides washing the potatoes the water moves them to the catching basin of the elevator that conveys them onto trucks. Liquid tight trucks haul water to the harvester and the crop to storage.

In the area of sweet potatoes, North Carolina State researchers have built a harvester that digs, separates, and sizes tubers in a once-over operation.

Members of the National Board of Directors briefed Dave on the FFVN organization and the location of the schools.

Future Farmers In Vietnam

Upon a request from South Vietnam's Director of Agricultural Education, the FFA began a program last year to assist in forming a youth organization for vocational agriculture students in Vietnam. This project is a cooperative effort with the Agricultural Education Division of the Agency for International Development. In April National FFA Vice President Dave Dietz went to South Vietnam to represent the FFA. Here's what he found.

THE purpose of my going to South Vietnam was to make direct contact with Vietnamese youth and adults associated with the Future Farmers of Vietnam (FFVN) program This included visiting chapters, and conversing with students to instill interest and enthusiasm among present and future leaders. And in so doing, help develop a specific plan for further cooperation between FFA and FFVN

Presently, there are ten schools with vocational agriculture programs operating in South Vietnam, seven of them having been built in the last three years. Three more are scheduled to be built this year for a total of 13 by 1971. Total enrollment today numbers 3,000 with some schools projecting 100 percent growth next year.

Teachers are now being educated at training centers in Saigon, Can Tho, and the agricultural college outside of Saigon. Until now, agricultural education has been stymied by a lack of teachers

The agricultural potential of South Vietnam includes rich soils, a well suited climate, and a varied geography. Moreover, many types of crops can be grown with relatively large yields. The country lacks industrial raw materials.

At the same time, the people of South Vietnam are family oriented. That is, families generally exist and maintain themselves only within their relation or family circle. Also, over 70 percent of the country's population is rural.

South Vietnamese educators are hopeful that a progressive, constructive, and well organized youth group can help supplement this family social structure. Likewise, with emphasis on agricultural education, they look for a particularly bright future for South Vietnam.

The FFVN addresses itself to these objectives with youth involvement, especially in rural areas, and is providing Vietnamese young people with the opportunity to exercise self-help. First, new farming techniques can be developed by and/or implemented through the schools. FFVN members through their projects then take this new information and apply it to their home situation. Their fathers and neighbors watch the results of this new information and many times try it, too. This is much the way vocational agriculture and FFA have influenced America's agricultural progress.

South Vietnamese young people are vitally enthused, interested, and dedicated to their new organization. They grasp the ideals and principles of the Future Farmer program and desire to be instrumental in the social, economical, and agricultural development of Vietnam. Their adult leaders are working toward a close relationship between the local chapters and the national FFVN program. In barely one year's existence, FFVN membership has grown to over 1,000.

It is my belief that a strong Future Farmer program can assist in all phases of Vietnamese agricultural development. Therefore, it is my recommendation that the FFA continue to provide an opportunity for the South Vietnamese to exercise self-help and development in vocational agriculture.

Three immediate ways that we as Future Farmers can provide help to the South Vietnamese are as follows: 1. Open the lines of communication with the Vietnamese schools by giving addresses of South Vietnamese chapters to three to five FFA chapters. Through these chapters FFA magazines and publications, farm periodicals, and other material about youth projects and activities could be exported to FFVN members. 2. Initiate an exchange program to assist in developing FFVN and agriculture. 3. Make detailed reports available to Vietnamese adults on how to establish, conduct, and promote youth activities, primarily for the implementing such events as public speaking, parliamentary procedure, livestock judging, and crop judging.

It was a rewarding opportunity to work with South Vietnamese youth and adults. As your FFA representative to the FFVN and National Vice President for the Pacific Region, it was especially gratifying to help with the FFA effort and witness agricultural progress of FFVN members.

Note: Chapters interested in becoming actively involved with FFVN are encouraged to write the International Department, National FFA Center, P.O. Box 15160, Alexandria, Virginia 22309.

FFVN representatives of the Binh Duong Chapter met Dave at the airport in Saigon before his tour of FFVN chapters.

THE CHAPTER SCOOP

news, notes, and nonsense from everywhere

by Jack Pitzer

Received reports about chapter officer elections from everywhere. **Tommy King** is new prexy for *Weir,* Mississippi.

N-N-N

Moundridge, Kansas, announced their new officers at chapter banquet.

N-N-N

Hessmer, Louisiana, Chapter held its annual Fun Feed.

N-N-N

Guest speaker at *Hutsonville,* Illinois, annual banquet was 1969 Central Region Star Farmer, **John Prahl.**

N-N-N

Albin, Wyoming, sponsors a community auction each year.

N-N-N

A $200 prize goes to winner of *Pine City,* Minnesota, Chapter's community Treasure Hunt if found first day of FFA WEEK.

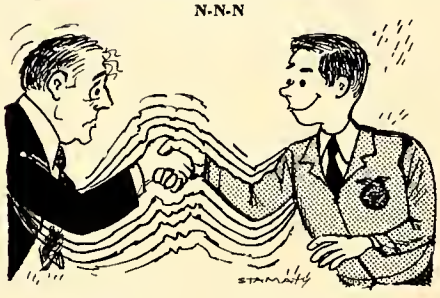
N-N-N

Gilmer County, West Virginia, FFA publishes a really complete chapter newsletter.

N-N-N

Officers of *Spanish Fork,* Utah, FFA get academic credits for a daily leadership class. Taught by advisor.

N-N-N



Storrs Regional, Connecticut, Chapter newsletter lists a "FFA Hearty Handshake" in each issue. Awarded to chapter friends.

N-N-N

George Pruitt reports that *Tunstall,* Virginia, FFA elected three chapter vice-presidents.

N-N-N

Arlington-Green Isle, Minnesota, Chapter contributed $1,000 to furnish rooms in new hospital addition.

N-N-N

New Raymer, Colorado, FFA is borrowing $2,000 to buy steers.

N-N-N

Committee to set up method of selecting chapter sweetheart of *Pierceton,* Indiana, is **Larry Manuel, Dan Surfus,** and **Jeff Ormsby.**

N-N-N

President and reporter for Bladen FFA Federation in North Carolina hail from *East Arcadia* Chapter.

Funeral services were held by *Silver Lake* FFA, Massachusetts, for an internal combustion engine. Climaxed environmental studies.

N-N-N

Fallbrook, California, FFA'ers entered the annual Camellia Society of San Diego show.

N-N-N

Has your chapter discussed using Official FFA Calendars to promote FFA in the community?

N-N-N

Alfalfa grown by the *Wheaton,* Missouri, FFA is sold to highest bidder by sealed bid. Has been good moneymaker.

N-N-N

Milton, West Virginia, members built bookshelves for public library.

N-N-N

Talawanda, Ohio, FFA organized a spirit club to bring out members to school basketball games.

N-N-N

"As a community service project our chapter will participate in a well testing program." *Fredericksburg,* Iowa.

N-N-N

Idea: Invite collegiate FFA members to be speakers at chapter banquets.

N-N-N

FFA'er **Jeff Enzminger,** *Davis* Chapter at Modesto, California, was cited for helping save five boys overcome by fumes in a camper.

N-N-N

Wurtland, Kentucky, Chapter set 10,000 trees at Greenbo Lake State Park.

N-N-N

Bill Tebbe of *Clovis,* California, Chapter is top citrus judge in FFA competition. First in grapefruit and oranges. Third in lemons and trees.

N-N-N

"Our chapter spent four hours in village of Wickford planting 50 japanese yews." **Dennis Pierce,** Greenhand of *North Kingstown,* Rhode Island.

N-N-N

Odessa, Missouri, FFA has been running a popcorn machine for 21 years.

Soil testing service is offered by community service committee of *Chestnut Ridge,* Pennsylvania, FFA.

N-N-N

Safety Improvement Association of *Rugby,* North Dakota, (Juniors) taped series of radio spot announcements about snowmobile safety.

N-N-N

FFA in *Williamsburg,* Iowa, sponsors weekend movies for community. Show good flicks and charge 75 cents.

N-N-N

Napoleonville, Louisiana, won five of seven state judging contests—ornamental horticulture, meats, dairy, pasture and range, and poultry.

N-N-N

Unity FFA at Mendon, Illinois, challenged two area Lions Clubs to a parliamentary practices contest.

N-N-N

The *Horicon,* Wisconsin, Chapter held seventh annual banquet with FHA.

N-N-N

After conferring Greenhand degree, new members raced peanuts across the gym floor. *Wosley,* South Dakota.

N-N-N

Ten members of *Hamburg,* Iowa, will tour Washington, D.C. on FFA summer trip. Hope they stop by National FFA Center.

N-N-N

Crockett, Texas, FFA has elected a chapter historian.

N-N-N

Mark Morris FFA in Longview, Washington, found first graders can ask embarrassing questions at annual Baby Animal Farm.

N-N-N

Four Arizona FFA members won $400 Standard Oil Scholarships: **Fred Kartchner,** *St. David;* **Mary Hestand,** *Willcox;* **Noble Jackson,** *Willcox;* **Danny Montgomery,** *Amphitheater.*

N-N-N

Sure good to get lots of letters from chapters and members everywhere. If your state isn't represented, chances are we haven't heard any news, notes, and nonsense from you.

John Sanders, Coolidge, Arizona, [illegible] his luck on a chapter campout in the [illegible] Mountains by Springerville.

Gi[illegible] Photo

Think Small to Catch More Fish

Here are some professional tips for getting more fish on the hook. ***By Russell Tinsley***

PRACTICALLY every stream, pond, or lake holds fish. Finding available places to go fishing is no worry, despite where you might live. The real problem is getting the fish on the hook end of a rod and reel.

No one has come forth with a foolproof plan for catching fish all the time. If I had a surefire scheme I certainly would be in luxurious retirement rather than writing outdoor articles for my livelihood. But I can let you in on a secret that will help in beating the fishing odds.

Look at it like this. In any given body of water there are always more small, pan-sized fish than there are large ones. Smaller fish, like growing kids require a considerable intake of food; unlike old and larger specimens which become inactive and eat less frequently. So it is a simple fact that since there are more smaller fish and they usually are hungry, it is easier to catch several this size than it would one large bragging-sized fish. And if taken on the proper tackle, like a fly rod, even a hand-sized bream can be a sporty proposition.

The obvious first step to catching more fish is to determine what these smaller fish eat.

Open the stomach of a bream, yearling bass, or crappie and you'll find dwarfish foodstuffs—tiny crustaceans like crayfish, small bait fish, and insects. A five-pound plus bass, for example, might be attracted by something rather stomach-filling—a sunfish, perhaps—but a crappie will go for a minnow less than an inch long. The typical bluegill rises to capture insects on the water surface.

It would make no logic, then, to present a three-inch plug to catch a white bass, crappie, bluegill, or whatever you

(Continued on Next Page)

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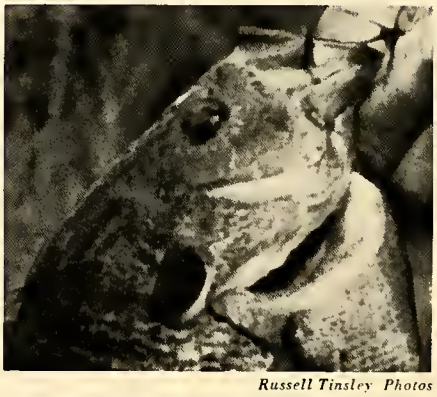
Think Small to Catch More Fish

might be seeking. Yet any of these species likely would be fooled by an inch-long streamer fly which resembles a minnow, or maybe a wet or dry fly that imitates an insect, or even a nymph drawn along the bottom in the manner of a crayfish.

But this isn't all. While fishing tiny baits for small fish there always is that possibility that you'll catch the eye of a big bass, northern pike, or some other trophy specimen which inhabits the waters you are fishing. I've seen numerous lunker bass taken on fly tackle. Fly fishing not only takes fish in quantity, it also scores on quality at times.

So the solution to our problem of how to get fish to bite is to think small. Use fly tackle to present baits of the size small fish forage on in their everyday diet. And by small I mean something minute: a dry or wet fly about No. 10 in size or even smaller; a one-inch-long streamer fly; tiny nymphs. Food this size abounds around and in any pond, stream, or lake, and it comprises a bulk of a fish's diet.

Most people associate fly tackle with cold-water trout, but actually, this type fishing is even more deadly on warm-water species. Another misconception



Russell Tinsley Photos

This bream hit a yellow No. 10 wet fly.

is that fly tackle is difficult to master. Contrary to what you have heard, anyone with just 10 or 15 minutes practice in his backyard can learn the basic fundamentals and become proficient enough to get a bait in the water which will dupe fish.

Since the line rather than what is on its end is cast in fly fishing, it is imperative that you get balanced tackle. This is the secret to effortless fly casting. Each rod has a number stamped on it which indicates the size of line to use. The reel in most fly fishing serves no other purpose than simply a place to store the line. The key is that balance between rod and line.

Fly fishing isn't expensive. A complete outfit can be had for $35 or less, including a basic assortment of artificial flies. A pocket-sized booklet entitled "Fly Rod Fishing Made Easy" is available for 25 cents to cover handling and mailing from the Cortland Line Company, Cortland, N Y. 13045. It gives the lowdown, in text and illustrations, on purchasing the correct equipment and learning to cast.

Another plus factor of fly fishing already mentioned is that a whippy

Bass often take to tiny popping bugs.

eight-foot rod weighing less than your billfold makes big fighters of little fish. Even a sunfish can bend the limber tip. Yet the rod has sufficient backbone to subdue larger specimens like black bass.

As for flies to buy, any bait designed for catching trout—nymph, dry or wet fly, streamer fly—will dupe warm-water species like bass, crappies, and bluegills. Tiny popping bugs also are good. The bug should be the smallest you can buy since larger bugs "drag" on the cast and are more difficult to throw. Just purchase basic colors like, yellow, white, and black, or combinations of these, and you won't go wrong.

One thing you'll soon learn about fly casting is that it requires more finesse and skill than other fishing—and elbow room, since almost as much line as you'll cast goes behind you on the backcast. Most places you can locate enough open space to cast from shore, and while this usually will get a few fish, you'll do much better if you can move about and cover more water.

A car-top boat is one mode of transportation. Another is an innertube float. Or perhaps just a pair of lightweight, chest-high waders will do the job, permitting you to move away from shoreline obstructions into new waters.

This, in a capsule, is our case for fly fishing. But we would like to add one pertinent footnote: fly tackle, even if you're not catching fish, is a delight to use, a picture of finesse and rhythm. The accent is on "feel" and "timing" rather than brute strength.

Try it; you'll be surprised how easy fly tackle is to use.

Profit Without Capital

By Dan Reuwee

LAST year Rex Bishop, a junior at North Miami High School, grossed over $2,500 from his nursery business. And that's not bad when you consider that Rex doesn't own any land or equipment.

His nursery operation is on the 22-acre school farm, owned by four Miami high schools. Rex pays a $10 fee to help offset the school farm's operating expenses. In addition, he pays rental on his nursery plots and purchases all supplies that he uses.

Rex rents 5 x 12 foot plots at 50 cents a plot per month and last year managed 14 plots. He buys supplies including cans, seed, soil, and fertilizer while the school furnishes water and equipment.

Rex is one of 140 students in the Miami area who are optimistic about the future of agriculture. Rather than suppress their optimism and interest, the Miami school system has adapted its vocational agriculture program to meet the changing needs of the agriculture industry.

The only thing Rex and other vo-ag classmates do not do for themselves is market their own plants. "The vocational agriculture instructors take care of that," says Advisor Perry Sistrunk. "This makes the bookkeeping easier for each student and insures that all students have an equal chance of selling theirs. We charge 50 cents per can for most plants and receipts are turned over to a full-time secretary who keeps a ledger on sales and expenses for each student."

"Not all of my students have been as successful as Rex," Advisor Sistrunk admits, "but many have made good profits on their plots." Rex increased his profits considerably last fall by landing a contract to propagate 30,000 Surinam Cherry plants for a nursery.

The young nurseryman is quick to point out that not all of his plants sell for 50 cents. He has sold several Dracena-Marginata, a palm like plant that has come into great demand for decorating homes and offices. "This plant will sell for about $10 around here," says Rex, "but in the northern states they're selling for $50 to $75 right now."

Rex is an active member in the North Miami FFA Chapter where he is secretary. In addition, he is on the parliamentary procedure team, the dairy judging team, land and forestry teams, and was in the chapter speaking contest. Incidently, the forestry team that he was on placed first in state competition.

As for his plans for the future, Rex says he's not sure what he is going to do. "As yet, I'm seriously considering staying in ornamental horticulture, though," he says, "and some day I'd like to own my own nursery."

Conferring with Rex about his plants is Mr. Sistrunk, his vo-ag instructor.

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FFA IN ACTION

Seeds For Vietnam

The collegiate FFA at Pennsylvania State University has sent vegetable seeds to the people of South Vietnam. The project was conducted with the cooperation of Agway in State College, Pennsylvania.

The seed project was initiated at the request of Robert Phipps, a Penn State graduate in agricultural education. Mr. Phipps works with the International Rescue Committee (IRC), a voluntary organization supported by foundations, corporations, and the general public. He is presently working with the organization's Food for Peace Team in South Vietnam.

The team's purpose is to get food to the people who need it in poverty areas by working through institutions such as schools, orphanages, and refugee camps.

The section of the program the FFA is helping with is food for remote areas. It is hard to get supplies to these areas so the Food for Peace Team is trying to put the people in remote areas on a self-sufficient basis by starting gardens and small farms at the institutions. If the team can teach the South Vietnamese how to grow different types of food then they will be able to feed themselves in the future.

Seeds selected by the Penn State FFA and Agway included sweet corn, peas, beans, beets, carrots, lettuce, melons, and cucumbers. In addition to the vegetable seeds, insect powder and timothy and clover seed were also sent.

Dr. Frank Anthony, of the Agricultural Education department and FFA advisor, pointed out that by trying different seeds the Vietnamese will discover which plants grow best in their area. Then they will be able to expand their diets to include a variety of foods.

Any group or individual who wishes to help by sending seeds should first write to the following address explaining their plans: Mr. Robert Phipps, MACV/ CORDS Reg. I, Refugee Division (IRC), APO, San Francisco, California 96349.

AIC Winners

Four FFA chapters won national honors in the Cooperative Leadership program sponsored by the American Institute of Cooperation (AIC). The chapters are Belvidere, New Jersey; Santa Fe FFA of Alachua, Florida; Mowrystown, Ohio; and McClave FFA, Colorado.

These chapters will share in a $2,000 travel fund provided by the AIC to enable officers and advisors to participate in AIC's 42nd Annual Institute. This year's Institute will be held August 2-5 at Ohio State University in Columbus before an audience of over 3,000 agricultural leaders, young farmers, and rural youth.

Besides the national awards, plaques will also be presented to 15 state winners at the upcoming Institute. They are: Bellwood FFA of Bellwood-Antis, Pennsylvania; Brattleboro, Vermont; Terra Alta, West Virginia; Perry, Georgia; Saline, Louisiana; Beaver Creek FFA of West Jefferson, North Carolina: Bowman, South Carolina; Brownstown, Indiana; Iowa Falls, Iowa; Eskridge, Kansas; Hopkins, Michigan; New Ulm, Minnesota; Williston, North Dakota; Cadott, Wisconsin; and Sidney, Montana.

Winners are chosen on the basis of their learning-by-doing activities in cooperatives and projects in cooperation with other organizations in their communities.

FFA'ers Drive at Show

Members of the Rochester, Illinois, FFA performed at the seventeenth annual Farm Progress Show near Buffalo last fall. They put on the whole show for the Massey Ferguson exhibit by driving and demonstrating the complete line of tractors and combines.

Each member drove one model of tractor in a 20-minute show six times a day for the three day show. One member demonstrated how to change from a grain head to a picker head on a combine in five minutes. Two others demonstrated lugging power and a safety trip plow. Still others operated snowmobiles.

After the show, all the members were treated to a banquet and $1,000 was given to the chapter for their services.

Rochester FFA'ers were given briefing before demonstrating the machinery.

Agriculture U.S.A.

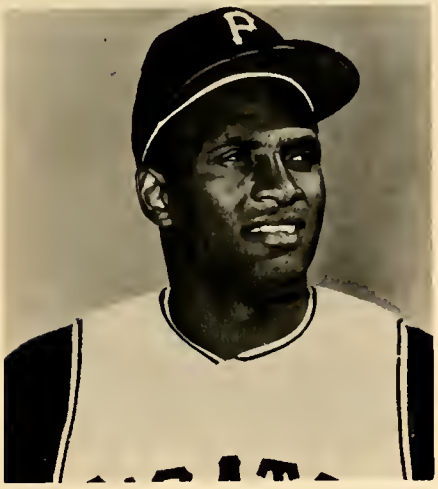
Star Farmer Oscar Manbeck, right, Star Agri-Businessman Ken Dunagan, left, were honored on the "Agriculture USA" show by the host John Stearns.

Ed Hatchett, national public speaking champ from Kentucky, visited Marineland of the Pacific after his appearance on the NBC-TV "Agriculture USA."

(Continued on Page 30)

SPORTRAIT

By Stan Allen



Pirate's outfielder Roberto Clemente.

ROBERTO Clemente, veteran outfielder of the Pittsburgh Pirates, has won most of baseball's honors except the recognition due a player of his caliber. Clemente is one of the best all-around outfielders to play the game, but his name seldom appears on many all-time team rosters.

Roberto played ball almost every day of his young life in Carolina, Puerto Rico, his home town. He was also a fine track star for the Carolina High School. It didn't take major league scouts long to spot Roberto when he played for the semi-pro Santurce team while in high school. The old Brooklyn Dodgers signed him right after he graduated and assigned him to their Montreal farm club in 1954. Clemente played third base and the outfield in 87 games and hit for a .257 average.

The Pittsburgh Pirates picked Clemente up in the 1955 player draft when the Dodgers forgot to place him on the major league roster. It has proved the best buy they ever made as Roberto has been a permanent fixture in Forbes Field since. He hit big league pitching at a .255 clip his first year and with power, clouting 23 doubles, 11 triples, and 5 homers. Roberto came back with a .311 batting average in 1956 and drove in 60 runs.

Injuries held his play to 111 games in 1957 when his average dropped to .253, but it climbed to .289 in 1958 and to .296 in 1959. Bob began to hit his stride again in 1960 when he banged out 179 hits in 570 at bats for a .314 average, fourth best in the league. His 16 homers and 94 runs batted in played a major role in the Pirates 1960 National League crown Bob owns a .310 batting average in his one World Series appearance.

He was named to the 1960 National League All-Star team for the first of nine times and has a .322 lifetime batting average. Clemente became the first Latin player to win a National League batting title in 1961 with a .351 mark. He had 201 hits in 572 tries and pounded the ball for 319 total bases with 30 doubles, 10 triples, 23 homers, and 89 RBI's.

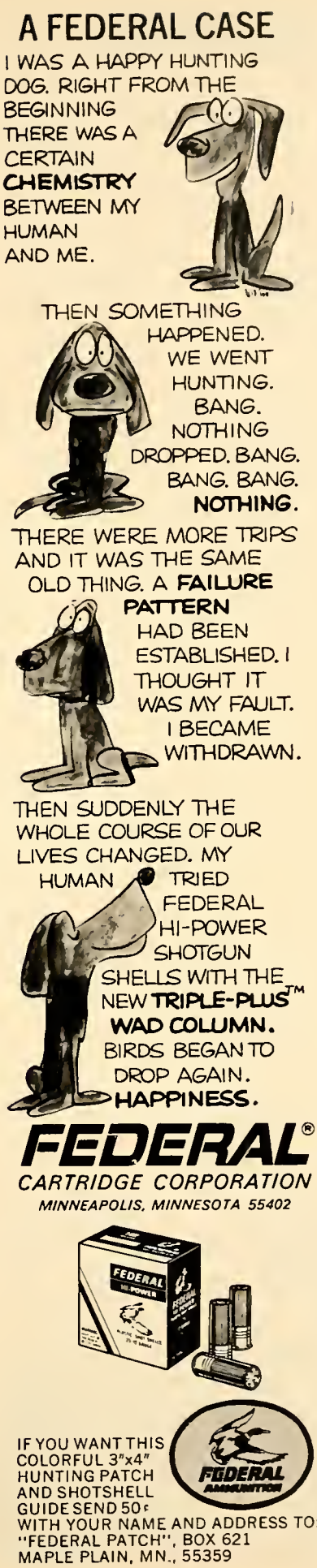
Clemente's bat is not his only asset to the Pirates. He is a great right fielder, has great speed, and a strong, accurate throwing arm. His speed shows up on the base paths in taking extra bases. Batting in the third or fourth spot in the lineup never gave him a chance to steal many bases, although he did swipe 12 in 1963 and he has a career total of 79.

Roberto had an amazing 23 assists on putouts in 1961 and participated in 5 double plays. That's really throwing! He also owns a Major League record in leading the league in outfield assists five times. Bob's fielding won him nine Gold Glove awards.

Roberto won his second batting crown in 1964 with a .339 mark and came back with a title winning mark of .329 in 1965. His average dropped to .317 in 1966 although he had 202 hits in 638 tries with 29 homers, 11 triples, 31 doubles, and drove in 119 runs. That performance won him the National League's Most Valuable Player award.

Bob hit his career high in 1967 when he had 209 hits in 585 attempts for a .357 average, both were league titles. He drove in 110 runs that year and 59 of the hits were for extra bases. Injuries kept his play down to 132 games in 1968 when he hit .291, the first time his average dropped below .312 in nine years. He roared back last year to hit at a .345 average, just three points short of a title. His 12 triples led the league and he also hit 19 homers and 20 doubles, with 91 RBI's. Nearing the midway mark of this season he owns third place on the National League list with a .339 average.

Clemente's lifetime record at the end of the 1969 season showed he had gone to bat 8,142 times in 2,091 games. He's collected 2,559 hits for a fine .314 average, tops among active major league players. He has a total of 370 doubles, 141 triples, 203 homers, and has driven in 1,099 runs. Bob Clemente should have time to make the exclusive 3,000 hit club, and then the experts may give him the super star status he has earned.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FFA in Action

(Continued from Page 28)

Chapters Test Lysine Corn

Fifty-five carefully chosen FFA chapters throughout Illinois, Iowa, Minnesota, Wisconsin, Michigan, Indiana, and Ohio have planted high lysine corn this year in a special evaluation program sponsored by Funk Bros. Seed Co.

Each chapter received one bushel of a new high lysine hybrid and planted it in isolation so that accurate observations could be made. A standard evaluation sheet will be completed by each chapter covering cultural practices used and observations of the crop from planting through harvest.

Following harvest, the high lysine corn will be fed to a control group of hogs while regular corn is fed to another. All rations and costs will be carefully documented so that cost of gain can be accurately determined.

In some cases the project is being handled by one or two boys while in others, it is a chapter project.

After completion of the program, the growing and feeding evaluation sheets will be sent to Funk Bros. Seed Co. The data will be summarized and returned to the chapters to share with other corn growers in their area.

Exchangee to Switzerland

Jerry Goolsby, immediate past president of the Guthrie, Oklahoma, FFA Chapter, will carry a box of soil of his home county (Logan) when he goes as an international exchange student to Switzerland this fall for a year.

The soil was obtained by each member of the several chapters in the county bringing a sample of the soil of his home farm to his chapter. These were mixed and the chapter samples were collected by the Coyle Chapter and mixed. A sample was withdrawn and placed in a box with seals of the FFA and the state of Oklahoma. The scroll, memorializing the presentation, included a translation into the German, as Jerry will be residing and attending school in a German-speaking area of the Swiss Republic.

The soil and accompanying scroll were presented at his chapter's annual banquet in May. It was noted during the surprise presentation that the event occurred during Soil Stewardship Week. *(Mrs. Helen Holmes)*

Bill Holmes, left, presents a scroll and a soil sample to Jerry Goolsby to take with him on his trip to Switzerland.

Learning Forestry Skills

Some 500 FFA members recently returned from attending forestry camps in five southern states, namely Virginia,

(Continued on Page 32)

National Convention More Exciting

NATIONAL FFA President Harry Birdwell has issued his call to the 1970 National FFA Convention. This Convention, the forty-third, will be held October 13-16 at the Municipal Auditorium in Kansas City.

In issuing the call, President Birdwell said, "Several changes in the program should make this year's Convention even more exciting. Never has there been a more outstanding slate of speakers featured at a National FFA Convention. In addition, the efforts and achievements of Future Farmers from every sector of our nation will be recognized and rewarded in new and dynamic ways."

A vesper service will mark the beginning of the Convention on Tuesday evening. American Farmer degree candidates, award winners, national officer candidates, and chapter representatives are encouraged to be present at the first session immediately following vespers.

Thereafter, says President Birdwell, "Friends and supporters of the FFA will be more impressively honored and time consuming Convention ceremonies and formalities will be speeded. This should provide greater inspiration to both participants and audience."

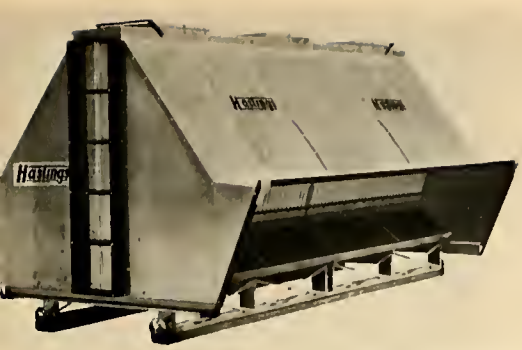
All state associations in good standing will be represented by two official delegates plus one additional delegate for each 10,000 members or major fraction thereof above the first 10,000, and two alternate delegates. Before transacting the business of the FFA for the coming year, official delegates and national officer candidates will attend the delegate orientation at 9 a.m. on October 13.

President Harry Birdwell

An invitation is extended to every FFA chapter to be represented by six Future Farmers or ten percent of its membership, whichever is greater. This figure does not include award winners or program participants.

"To prepare for your trip to the Convention familiarize yourself by reading, *You and Your National Convention*. Kansas City is a tremendous host for our National Convention activities. Let us continue to merit their faith in and enthusiasm for FFA," urges President Birdwell.

"Company - DISMISSED!"

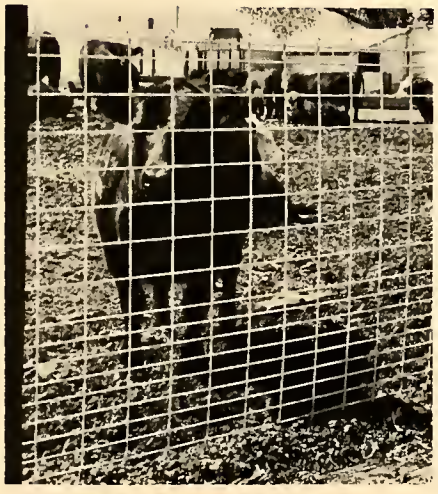


The new Model 300 feeder by Hastings Equity Grain Bin Manufacturing Company, Hastings, Nebraska, features an extended canopy at the ends and tops of the 16 foot long feed troughs. It holds about nine tons or 300 bushels of feed, ample capacity to feed 100 cattle for one week with plenty of feed in reserve.

This Maternal Robot will feed milk replacer to 40 calves or 80 lambs daily from a 75 pound capacity powder hopper. Water temperature and milk concentration are regulated by one of the two dials on the control panel. It's sold and distributed by Maternal Robot Corporation of Orange, Virginia.

Something New

Wahoo-Built Buildings, Wahoo, Nebraska, has introduced a new farrowing and nursery combination. Buildings have forced air ventilation and thermostatic heat control and are available in 8 to 20 sow units. Stalls convert to creeps with inside and outside pens.



These steel bar-mesh fence panels were galvanized after welding to stop rust. Panels are made by Behlen Manufacturing Company, Columbus, Nebraska, and come in 16 foot lengths. Combination (shown) and cattle fencing are 48 inches high; hog fencing, 35 inches.

A 30 hp engine powers this new 3200 Compact Loader from International Harvester. It can pivot in its own length and pass through 4 foot openings. The ¾-ton loader is available with 15 buckets in widths of 38 to 60 inches and a variety of attachments.

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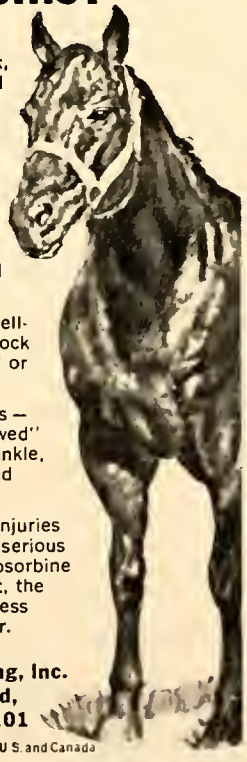

1. Stiff-gaited walk, or refusal to stand on all four legs are general symptoms of lameness. Check horse over carefully.

2. Swelling and heat on front of foreleg from knee to ankle. It's called "bucked shins."

3. Soft, painless swelling around the fetlock is called "windgall" or "windpuff."

4. Swollen tendons — swelling gives a "bowed" look from knee to ankle, so it's called "bowed tendon."

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FFA in Action

(Continued from Page 30)

Tennessee, North Carolina, Florida, and Oklahoma. Each state conducted one-week camps with the exception of Florida which had two one-week sessions.

FFA members had courses in tree identification, fire prevention and control, timber estimating, hardwood and pine management, reforestation, and timber stand improvement. The courses included field trips, instruction by foresters and field personnel from pulp and paper industry, and application of skills through practice and contests. Vocational agriculture teachers served as counselors at the camps.

Depending on the state, the camps have been conducted for a number of years. Tennessee held its twenty-first, Virginia, its twenty-fifth, and Florida's camp was its thirty-sixth.

The Southern Forest Institute sponsors these camps which are conducted by the various state forestry commissions. Civic-minded pulp and paper manufacturing companies in each state finance the camps.

Judging Team Wins Calf

The Bend FFA Livestock Judging Team took top honors at the Second Annual Charolais Field Day held November 22 in Madras, Oregon. Fifty-two teams represented FFA chapters from across the state.

Gary Turner was second high individual with a score of 390.9 out of a possible 400 points. Caroline Zahl was fifth high individual with a score of 386 points.

Members of the Bend team from the left are Dan Wallace, Dan Marsh, Jeanette Petrie, Caroline Zahl and Gary Turner with their new bull calf.

As the champion team, Bend was awarded a large Rotation Trophy, donated by the U.S. National Bank of Oregon; a banner; ribbons; and an eight-month-old Charolais bull calf donated by the Hafco Charolais Ranch in Scio, Oregon. The bull's name is Mr. Hafco Apollon, sired by the famed French bull Apollon. The calf is valued at $2,500 at the present time. He will be kept at the Bend FFA Land Laboratory.

Advisors of the chapter are Mr. Wright Noel and Mr. Tom Kitley.

Last year, at the first Charolais Field Day, the Sherman FFA Livestock team was the proud recipient of the first bull calf named Ceasar. *(Oregon Future Farmer)*

"It works like this: Sprinkle some on a neighbor's place, and all your bugs go over there!"

Chapter Sponsors Sidewalk

Children in Brackettville, Texas, used to walk to school in the street. It was hazardous for drivers and students alike since the route to the school was right through a business section.

Then the FFA chapter initiated a sidewalk building project and enlisted all around support of the community. All local organizations were visited to discuss financial support and ideas for construction. One of these visits netted extra labor force from the Commissioner's Court.

The county attorney helped straighten out legal situations and obtained easements for the new sidewalk.

After construction of the 1,186 foot long walk, fences were rebuilt and clean up was finished. Then the chapter furnished a detailed report to each donor. The county, city, and nearly all civic organizations cooperated in finishing the project. Now Brackettville is planning a city clean-up campaign based on the sidewalk "team effort." *(Charles Foust, Advisor)*

Thinking of Others

Members of the Howard Lake FFA Chapter in Minnesota helped a large department store by supervising a Kid's Fun Park so children could pet animals.

Granton, Wisconsin, Chapter collected fifty bags of oats from farmers to send a member to a camp for crippled adults. Response was enough to send two. Picture shows Advisor Steiner and members selling oats at an elevator.

Work Experience Abroad

Twenty-three FFA members from all over our nation are scattered throughout eight other nations in the world for the FFA's Work Experience Abroad program.

The members met at the National Center for a three-day orientation about FFA and our nation, plus visiting with agricultural attachés from the embassies of the countries where they would be living. The orientation with the attachés gave the members a chance to get a preview of what it would be like.

FFA'ers will spend three months in the countries—France, Denmark, Switzerland, Britain, Austria, Netherlands, Sweden and Germany—living with a host family and working on a farm or agricultural business. They get room and board plus a cash wage of $45 to $195 per month.

A two-day mid-point conference will be held for the participants to get together at a central location overseas. It is a program to live and work as a native of the country, not just sight-see.

Participants in the FFA Work Experience Abroad program had an unusual ride to the airport for their departure.

Pharris Wins Scholarship

National FFA Secretary Dennis Pharris, of Hillsboro, Texas, has been named winner of a Texas A&M University College of Agriculture Leadership Scholarship.

The $500 award was provided by the expanding College of Agriculture Scholarship Program, a relatively new idea designed to attract outstanding young men and women to the university. Funds come from contributions made by A&M faculty and staff members and former students.

Pharris, now a student at Hill Junior College, was selected for the scholarship when he visited Texas A&M during the recent state FFA judging contests. Dennis will enroll at the university this fall and major in agricultural economics.

"I am well aware I have my thumb on your hamburger, young man, you surely wouldn't want it falling on the floor again?"

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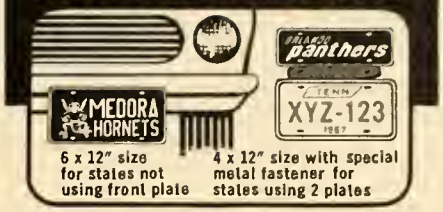

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HAVE YOU HEARD THIS ONE

Priest: *"Do you say a prayer before you eat?"*
Little boy: *"No, sir. My mom is a good cook."*

Sharon McKinsey
Losantville, Louisiana

Tim: *"I received a woolen sweater for my birthday present."*
Jim: *"But it isn't wool, it has a label marked 'cotton' on it."*
Tim: *"I know, that's to fool the moths."*

Patrick Kuntz
Orrin, North Dakota

"Shall we take this road back to the city?" the visiting city folks asked from their automobile. They had just helped themselves generously to the fruit of the farmer's many trees.
"You might as well," answered the farmer scornfully. *"You've taken almost everything else."*

Leroy Steffen
Long Prairie, Minnesota

Jack: *"What do you call a cow who wears a crown?"*
Zack: *"A dairy queen."*

Eugene Dirkman
Ahmeek, Michigan

Sam: *"Where do all the bugs go during the winter?"*
Bruce: *"Search me!"*
Sam: *"Well, no, I just wondered."*

Charlie Milliren
Withee, Wisconsin

Jane (entertaining Joe at dinner with the family): *"Sister, why didn't you put a knife and fork at Joe's place?"*
Little sister: *"Didn't think he needed it. You said he eats like a horse."*

Greg Aguillard
Elton, Louisiana

"What would you do if you were to inherit a million dollars tomorrow?" The first farmer said that he would quit farming at once. The second scratched his head, thought for a while and answered, *"I reckon I'd just keep on farming until it was all gone!"*

Bob Wolfe
Tucson, Arizona

"Nothing is impossible," the professor declared with finality. *"Nothing that the mind of man can conceive is impossible."*
"Professor," asked a small voice, *"did you ever try to strike a match on a marshmallow?"*

Mike Wilcox
Finly, Indiana

City fellar: A real estate salesman in a small town was spreading it on pretty thick in describing a house to a client. *"This place is paradise. The climate will cure anything. Nobody gets sick."*
Just then a long funeral procession came into view. The quick thinking salesman shook his head sadly, *"Poor old undertaker Brown. Just starved to death."*

Thomas Lamance
Auburn, California

Charlie, the Greenhand

Smith, reading facts and figures from his dad's insurance tables: *"Do you know that every time I breathe, a man dies?"*
Jones: *"Why don't you use a little mouth wash now and then."*

Dennis Ehle
New Haven, Indiana

Sam: *"Why is a calendar so sad?"*
Pete: *"I don't know, why?"*
Sam: *"Because its days are numbered."*

Tom Lynn
Ashland, Illinois

Jill: *"What's flat at the bottom, pointed at the top, and has ears?"*
Bill: *"I give up."*
Jill: *"A mountain."*
Bill: *"What about the ears?"*
Jill: *"Haven't you ever heard of mountaineers?"*

Sharon Gunter
Moncure, North Carolina

Dentist: *"Stop screaming. I haven't even started on your tooth, yet."*
John: *"I know, I know. But, you're standing on my sore toe!"*

Randy Dorrough
Paris, Arkansas

A farm boy was stranded a long way from home when he happened to see a car from his home state of Pennsylvania. He proceeded to let all the air out of the tires.
The owner returned and asked why he had done this.
The farm boy replied that he just couldn't resist the smell of some fresh air from back home.

Randy Kummer
Renfrew, Pennsylvania

First cowboy: *"Why do you wear only one spur?"*
Second cowboy: *"Well, I figure when one side of the horse starts running the other side will too."*

Jim Shepperd
Tijeras, New Mexico

Officer: *"Lady, you're crossing the street when the sign says 'Don't Walk.'"*
Lady: *"I thought that was an advertisement for a bus company."*

Toney McEachern
Lumber Bridge, North Carolina

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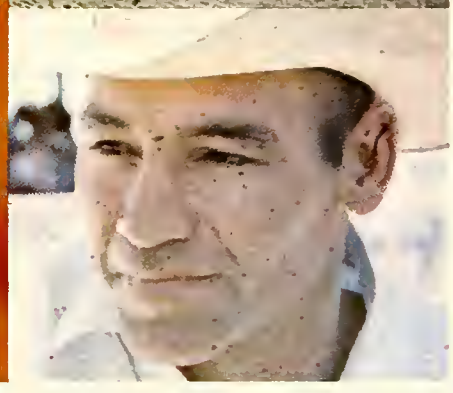

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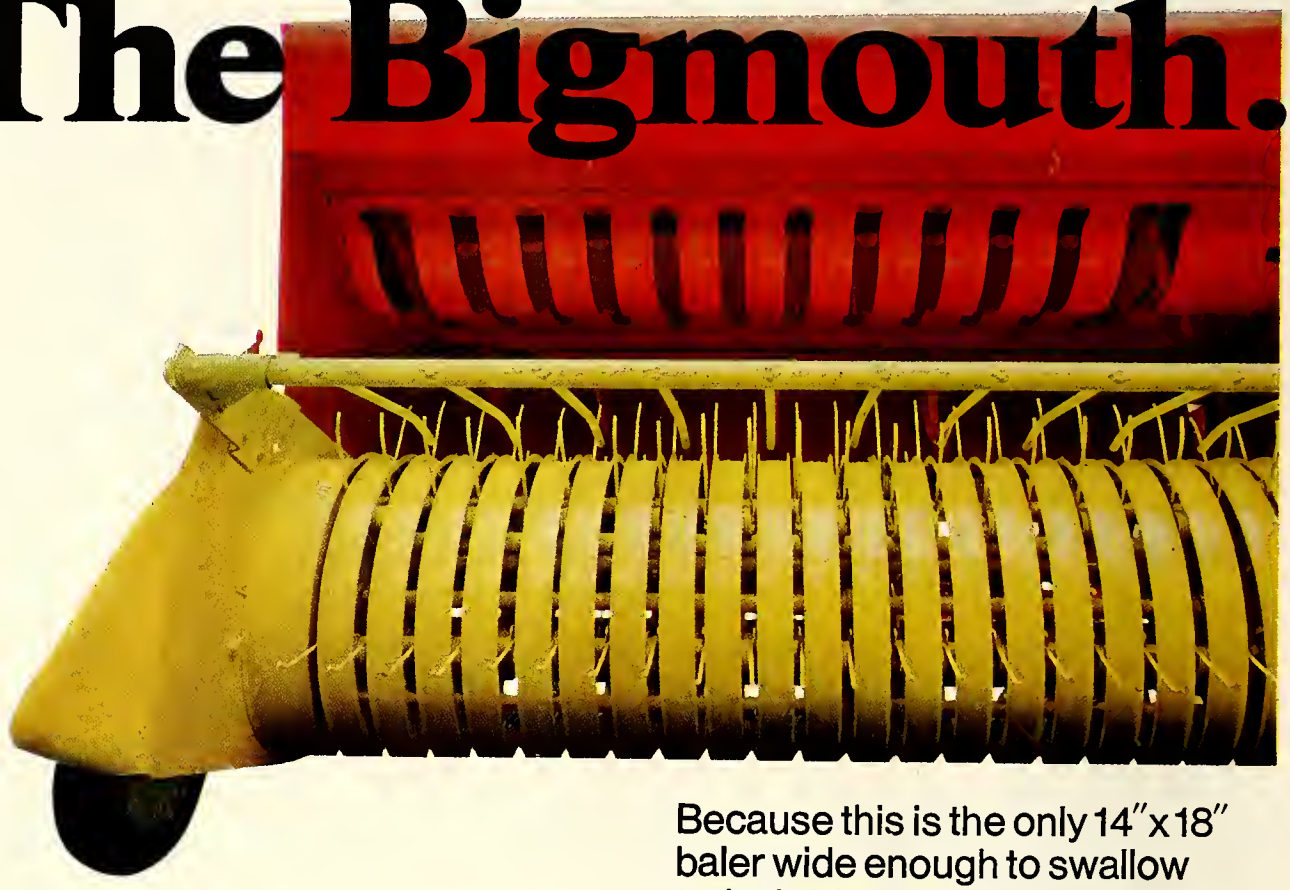

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